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FIRST AND FUNDAMENTAL TRUTHS

Psychology.

BY

JAMES McCOSH, D. D., LL. D., LITT. D.

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FIRST AND FUNDAMENTAL TRUTHS

BEING A TREATISE ON

METAPHYSICS

BY

JAMES McCOSH, D. D., LL. D., LITT. D.

EX-PRESIDENT OF PRINCETON COLLEGE, AUTHOR OF "METHOD OF DIVINE GOVERNMENT," "LAWS OF DISCURSIVE THOUGHT," "PSYCHOLOGY OF THE COGNITIVE POWERS," PSYCHOLOGY OF THE MOTIVE POWERS" "REALISTIC PHILOSOPHY"

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PREFACE.

EVERY thinking mind has occasion at times to refer to first principles. In this work I have set myself earnestly to inquire what these are; to determine their nature, and to classify and arrange them into a science.

In pursuing this end I have reached a Realistic Philosophy, opposed alike to the Sceptical Philosophy, which has proceeded from Hume, in England, and the Idealistic Philosophy, which has ramified from Kant, in Germany; while I have also departed from the Scottish and higher French Schools, as I hold resolutely that the mind, in its intelligent acts, begins with, and proceeds throughout, on a cognition of things.

If the mind does not assume and start with things, it can never reach realities by any process of reasoning or induction.

This work contains the results of my teaching of very large classes in Queen's College, Belfast, Ireland, and in Princeton College, America, and may be regarded as the cope-stone of what I have been able to do in philosophy.

I have expounded my philosophy in the text, and put the historical and critical disquisitions in smaller print; to be read continuously as carrying on the discussion, or to be reserved for reference — as my readers may find it best suited to accomplish the end they have in view.

PRINCETON, N. J., *February*, 1889.

CONTENTS.

INTRODUCTION.

PAGE

DEFINITION OF THE SCIENCE. *The five Mental Sciences* . . 1

PART FIRST.

GENERAL VIEW OF PRIMITIVE PRINCIPLES.

CHAPTER I.

NATURE OF FIRST TRUTHS. *Meaning of the terms "philosophy" and "philosophical"* 5

CHAPTER II.

THREEFOLD ASPECTS OF INTUITIVE TRUTHS. *Innate Ideas* . 12

CHAPTER III.

TESTS OF INTUITIVE TRUTHS. *Views of Aristotle, Leibnitz, Kant, Locke, Scottish School, Schelling, Hegel* 16

CHAPTER IV.

SPONTANEOUS AND REFLEX USE OF INTUITION. *Kant's view* . 19

CHAPTER V.

SOURCES OF ERROR IN METAPHYSICAL SPECULATION . . 22

CHAPTER VI.

ERRONEOUS VIEWS OF INTUITION. *Locke and Kant* . . . 27

CHAPTER VII.

LEGITIMATE USE OF FIRST PRINCIPLES. *The Sophists* . . 31

CHAPTER VIII. — (SUPPLEMENTARY.)

BRIEF CRITICAL REVIEW OF OPINIONS IN REGARD TO INTUITIVE TRUTHS 34

PART SECOND.

PARTICULAR EXAMINATION OF PRIMITIVE TRUTHS.

BOOK I.

PRIMITIVE COGNITIONS.

CHAPTER I.

THE MIND BEGINS ITS INTELLIGENT ACTS WITH KNOWLEDGE . 58

CHAPTER II.

OUR INTUITION OF BODY BY THE SENSES. *Account by Müller. Cheselden case. Review of Berkeley, Kant, Hamilton, Fichte, Ferrier, Saisset, Locke, Spencer* 62

CHAPTER III.

DISTINCTIONS TO BE ATTENDED TO IN OUR COGNITION OF BODY. *Difficulties in sense of sight. Apparent deception of the senses. Views, of Eleatics, Plato, Aristotle, Stoics. Epicureans and Academics, Augustine, Anselm, Kant, Hamilton. Sensational School and Brown* 75

CHAPTER IV.

APPARENT DECEPTION OF THE SENSES 83

CHAPTER V.

THE ESSENTIAL QUALITIES OF MATTER. *Descartes and Leibnitz as to Space and Force* 85

CHAPTER VI.

OUR INTUITIVE KNOWLEDGE OF SELF OR SPIRIT. *Critical review of views of Descartes, Locke, Buffier, The Scottish School, Kant, The German Pantheists, Hamilton, Mansel* . . . 88

CHAPTER VII.

SUBSTANCE. *Critical review of opinions of Descartes, Spinoza, Locke, Berkeley, Hamilton* 100

CHAPTER VIII.

MODE, QUALITY, PROPERTY, *Essence. View of Locke* . . 110

CHAPTER IX.

BEING 118

CHAPTER X.

EXTENSION. *Views of Bain, Müller* 121

CHAPTER XI.

NUMBER. *Views of Aristotle, Locke, and Buffier* 124

CHAPTER XII.

MOTION. *Views of Aristotle, Descartes, Locke, Franz case* . . 126

CHAPTER XIII.

POWER. *Mill's definition of Matter and Mind criticised* . . . 128

BOOK II.

PRIMITIVE BELIEFS.

CHAPTER I.

THEIR GENERAL NATURE. *Presentative and Representative knowledge. Views of Augustine, Anselm, Abelard, High Church Divines. Puritans, Charnock, Kant, Jacobi, Hamilton* 130

CHAPTER II.

SPACE AND TIME. *Lucretius, Brown, Stewart, Trendelenburg, Hamilton, Herschel, Leibnitz, Clarke, Kant* 141

CHAPTER III.

THE INFINITE. *Hobbes, Locke, Hamilton, Mansel, Howe, Leibnitz* . 154

CHAPTER IV.

EXTENT, TESTS, AND POWER OF OUR NATIVE BELIEFS . . 176

BOOK III.

PRIMITIVE JUDGMENTS.

CHAPTER I.

THEIR GENERAL NATURE AND A CLASSIFICATION OF THEM. *Views of J. S. Mill, Locke, Kant, Hamilton, Bain* 181

CHAPTER II.

Relations Intuitively observed by the Mind. Identity, Comprehension, Resemblance, Space, Time, Quantity, Active Property, Cause and Effect. *Leibnitz and Kant, as to Identity. Analytic Judgments regulating Logic* . . . 191

CHAPTER III.

Particular Examination of Cause and Effect. *Kant. Uniformity of Nature. Criticism of Mill. Miracles* . . . 207

BOOK IV.

Our Intuitive Moral Convictions.

CHAPTER I.

Their General Nature 217

CHAPTER II.

Virtue with its Attached Obligations. *Smith, Brown, Mackintosh. Examination of Mill's Utilitarianism* 219

CHAPTER III.

Error and Sin 227

CHAPTER IV.

The Will, Primitive Truth in. *Kant's view* 233

CHAPTER V.

Relation of Moral Good and Happiness 239

PART THIRD.

INTUITIVE PRINCIPLES AND THE SCIENCES.

BOOK I.

Metaphysics.

CHAPTER I.

The Science Defined 244

CHAPTER II.

Fundamental Truth and Evolution 249

BOOK II.

Gnosiology.

CHAPTER I.

The Origin of our Knowledge and Ideas. *Statement and criticism of Locke's views* 256

CHAPTER II.

Limits to our Knowledge, Ideas, and Beliefs . . . 265

CHAPTER III.

Relation of Intuition and Experience 271

CHAPTER IV.

The Necessity attached to our Primary Convictions . 278

CHAPTER V. — (Supplementary.)

Criticism of Distinctions as to the Relation of Intuitive Reason and Experience 285

BOOK III.

Ontology.

CHAPTER I.

Knowing and Being 293

CHAPTER II.

Idealism 299

CHAPTER III.

Scepticism and Agnosticism. *M. Morel, Ferrier, Hamilton* . 309

CHAPTER IV. — (Supplementary.)

The Conditioned and Unconditioned 321

CHAPTER V. — (Supplementary.)

The Antinomies of Kant 324

CHAPTER VI. — (Supplementary.)

The Relativity of Knowledge 326

CHAPTER VII. — (SUPPLEMENTARY.)

Examination of Mill's Metaphysical system 328

CHAPTER VIII. — (SUPPLEMENTARY.)

The Nescience theory of Mr. Herbert Spencer 332

BOOK IV.

METAPHYSICAL PRINCIPLES INVOLVED IN THE SCIENCES.

CHAPTER I.

METAPHYSICS IN THE PRACTICAL AFFAIRS OF LIFE . . . 337

CHAPTER II.

METAPHYSICS OF PHYSICS. *Whewell* 339

CHAPTER III.

METAPHYSICS OF MATHEMATICS. *Criticism of Kant, Mansel, Stewart, and Mill* 343

CHAPTER IV.

METAPHYSICS OF FORMAL LOGIC 350

CHAPTER V.

METAPHYSICS OF ETHICS. *Locke.* 352

CHAPTER VI.

METAPHYSICS OF THEOLOGY 355

FIRST AND FUNDAMENTAL TRUTHS.

INTRODUCTION.

In popular apprehension Metaphysics is the most confused and confusing of all branches of inquiry. I claim that under one aspect it is the most certain of all departments of knowledge; it is so in its principles, which are fundamental. Under another aspect it is the most perplexed, as it is difficult to determine these principles, they are so involved in the varied and complicated operations of the mind.

The phrase has been made to cover all sorts of speculation, attainable and unattainable, possible and impossible. Of all things, it is important at the present stage of the history of philosophy that it should be carefully defined, that a distinct province be allotted to it, and that it should not be allowed to trespass upon the territory of its neighbors.

The term points to a branch of investigation beyond (μέτα) Physics. The profound thinkers of the world have all believed in something in the mind deeper and higher than the fleeting phenomena of the senses. I am convinced that there are powers working which underlie and support all its intelligent exercises. If this be so, it is surely of vast moment to determine what these are. This is the field to be allotted to Metaphysics.

Aristotle has remarked that Metaphysics, or what he calls First Philosophy, while the first of the sciences in the order of things, will be the last to be constructed.

The reason is, that these principles at the basis of all the higher operations of the mind are so mixed up with them that it is difficult to separate them and make them stand out distinctly to the view. But I believe that the associated mental exercises have now been so far examined and ascertained that it is possible to discover and express the nature of the fundamental laws on which they stand. Since the days of Aristotle we know what are the laws of reasoning and of discursive thought generally. Butler and Kant have thrown much light on the moral powers of man's nature. Important discoveries have been made as to sense-perception by physical and physiological research. I believe we can now furnish an approximately correct analysis of the varied elements in our emotions. With so many parts of the country separated and so far settled, we may allocate its place to the frontier province which guards the whole.

I define Metaphysics as THE SCIENCE OF FIRST AND FUNDAMENTAL TRUTHS. I cherish the conviction that it may be made as clear and satisfactory as Logic, the science of discursive truth, has been, since the days of Aristotle (*a*). It shows us what we are entitled to assume and what we are not entitled to assume without mediate proof. It does so by opening to our view those primitive truths which at once claim our assent and furnish a sure foundation to all our knowledge; which, like the primitive granite rocks, go down the deepest and mount the highest (*b*).

(*a*) Five mental sciences have emerged: (1.) PSYCHOLOGY, which observes the operations of the mind generally, with the view of discovering their laws. (2.) LOGIC, the science of Discursive Thought, in which we proceed from what is given or allowed to what is drawn from it. (3.) ETHICS, the science of our Moral Nature. (4.) ÆSTHETICS, which treats of the feelings raised by the

Beautiful, the Picturesque, the Ludicrous, and the Sublime. (5.) METAPHYSICS, the science of First Truths. This gives a determinate (a phrase of Locke's) place to Metaphysics.

(*b*) I am so old as to remember how much service was done to Formal Logic among English-speaking people when Whately, and Hamilton who searchingly examined him, insisted on keeping the science within a definite field, instead of allowing it to wander among all sorts of topics, practical and unpractical, bearing on thinking. A like benefit may be conferred on Metaphysics by confining it within rigid boundaries, instead of attempting to settle (often only to unsettle) all questions regarding God, the World, and the Soul.

PART FIRST.

GENERAL VIEW OF PRIMITIVE PRINCIPLES.

CHAPTER I.

NATURE OF FIRST TRUTHS.

I.

THERE are Objects, there are Truths, which are perceived Directly and Immediately; this is not the case with the great body of our knowledge. Most of what we know is acquired by a process of induction, that is gathered observation, or of reasoning. It is not by direct observation, but by testimony, that those of us who have not been in China believe that there is such a country. It is not by immediate perception, but by reasoning, that we know that the angles of a triangle are together equal to two right angles. But there are truths which are seen at once on the bare inspection of the objects. We know ourselves directly as existing in pleasure or in pain, as thinking or feeling. We know that the self of to-day in joy is the same as the self of yesterday in sorrow. On the bare contemplation of these two straight lines we perceive that they cannot enclose a space, and on a surface being presented to us, that the shortest distance between these two points in it is a straight line. In order to convince us of these and innumerable such truths, we need no gathered experience, and we make no use of inference.

The power, or rather the powers, for they are many and varied, which are percipient of these objects and truths are called Intuitive. The truths thus discovered are Primitive; they are perceived at once. They are also Fundamental; other truths are built upon them, and to us, however they may stand to other intelligences, they need nothing extraneous to sustain them. The body of such truths constitutes Metaphysics, or what may be called Metaphysical Philosophy, which is the deepest of all Philosophy.

II.

Our Intuitions look to "Things" and the Relations of Things. They are regarded by us as Real. These phrases need no definition; we know their meaning at once. Knowledge implies things known. We assume them as existences. We proceed upon them. We may not know the full nature of the things, but we know so much of them. We know ourselves as thinking, or in a state of feeling. We know that body as spreading out an extended surface before us, or as resisting our energy.

We farther on decide as to these two straight lines, that if they proceed one inch without coming nearer one another, they will not, however far prolonged, approach each other more closely. We discover relations between these and other truths. Proceeding on these as premises, we draw conclusions from them. The original objects being real, all that is drawn from them by logical inference is also real. Beginning with a world of realities, we may continue in it all along, wandering at times, as fancy leads us, into an ideal world, but knowing it all the while to be ideal, and ever ready to return to the real world to stay and stablish ourselves.

The philosophy which assumes and proceeds upon the reality of things may be called a REALISTIC PHILOSO-

PHY. I am convinced that in the end this will be acknowledged as the true philosophy, and will set aside the Sceptical Philosophy, which denies the reality of things, and the Agnostic Philosophy, which affirms (as the only thing it knows) that we cannot know things, and the Idealistic Philosophy, which adds to things out of the stores of the mind, with the view of improving them. In a crude, uncritical shape, this was the first philosophy; and when duly constructed, with the help of the necessary "rejections and exclusions," it will be the final philosophy. It will be found, as we advance, that Metaphysical Philosophy has two offices to discharge: one to consider our Intuitions, and the other the things at which intuition looks.

III.

Our Intuitions look to Single Objects, and not to abstract or general notions. A very different account is often given, if not formally, at least implicitly, of intuition or of intuitive reason, by those who believe in it. Man is represented as gazing immediately on the true, the beautiful, the good, meaning in the abstract or in the general. It is admitted that there must be some sort of experience, some individual object presented as the occasion; but the mind, being thus roused into activity, is represented as contemplating, by direct vision, such things as space and time, substance and quality, cause and effect, the infinite and moral good. I hope to be able to show that this theory is altogether mistaken. Our appeal on this subject must be to the consciousness and the memory, and these give a very different account of the process which passes through the mind when it is employed about such objects. Intuitively the mind contemplates a particular body as occupying space and being in space, and it is by a subsequent

intellectual process, in which abstraction acts an important part, that the idea of space is formed. Intuitively the mind contemplates an event as happening in time, and then by a further process arrives at the notion of time. The mind has not intuitively an idea of cause or causation in the abstract, but discovering a given effect, it looks for a specific cause. It does not form some sort of a vague notion of a general infinite, but fixing its attention on some individual thing, — such as space, or time, or God, — it is constrained to believe it to be infinite. The child has not formed to itself a refined idea of moral good, but contemplating a given action, it proclaims it to be good or evil.

IV.

We can Generalize our Intuitions, and thus form Philosophic Principles. It is not necessary, in order to the action of our Intuitions, that we should study their nature as metaphysicians do. Like the physiological processes of the body, say in breathing and digestion, they act best when we take no notice of them. An officious intermeddling with them may tend rather to disturb their action. But the physiologist in constructing his science has carefully to observe the action of our frame when we are looking at objects, or when we breathe. So the metaphysician has carefully to watch the actions of our various intuitions, in order to discover their nature and their laws.

The native principles of the mind act, as physical laws do, at all times, and whether we observe them or not. The laws of the material world are discovered by the observation and generalization of their individual operations. It is in much the same way that we find out the laws of our original and native convictions. I boldly

affirm that it is as impossible to determine these as it is to ascertain the laws of the external universe, by *a priori* cogitation or logical inference. As they cannot be elaborated by speculation on the one hand, so they do not, on the other, as regulative principles, fall under the immediate notice of consciousness; all that we are conscious of are the individual exercises. But examining carefully the nature of the acts, we generalize them, and thus find the precise law of the principle, and embody it in a verbal expression.

The principle thus discovered is a philosophic one; it is a truth above sense, a truth of mind, a truth of reason. It is different in its origin and authority from the general laws reached by experience, such as the laws of gravitation or chemical affinity. These latter are the mere generalizations of our experience, which are necessarily limited; they hold merely to the extent of our experience, and as experience cannot reach all possible cases we can never say that there may not be exceptions. Laws of the former kind are of a higher and deeper nature; they are generalizations of intuitive convictions, carrying necessity and consequent universality in their nature. They are truths of our original nature, having the sanction of Him who hath given us our constitution and graven them there with his own finger. These general maxims constitute metaphysics. All proposed metaphysical philosophy should aim at being the expression of our intuitions in the form of general laws. We shall see that the generalizations may be inaccurately made, and almost all the numerous errors of the common metaphysics proceed from this cause; they are to be corrected by properly drawing the law out of the individual operations. When this is done, we have metaphysical philosophy.

The term "Philosophy" has not had a very distinct meaning for the last two or three ages. It should always be carefully distinguished from Science, which generalizes the scattered operations of nature into laws. Perhaps it may most appropriately be defined as the inquiry into the first principles of things, and then the philosopher will be one who conducts the inquiry. The adjective "philosophical" may be applied to all branches which inquire into the first principles of the department discussed. Metaphysical Philosophy, or simply Metaphysics, has a clear and distinct province allowed when it is understood as being a search for the fundamental principles of our mental operations.

V.

Induction, by which is meant a Gathered and Systematic Observation, has a place in Metaphysics. This will seem to many an extraordinary position. It will be regarded by them as stripping philosophy of its crown and sceptre which place it above all the ordinary sciences. It seems to make our deeper thinking to have no other foundation than human observation, which must necessarily be limited. Now, I wish it to be understood that I do not propose to rest fundamental truths upon our taking notice of them. These exist whether we observe them or not. My eye does not create that mountain as it looks upon it. The mountain stands there on its own foundation, and all that my eye does is to discover it. So it is with primitive truth: it rests on its own basis; it has its authority within itself; all that our observation has to do is to discern it, and find out what is its nature.

If we would find what intuition is, we must carefully inspect it; not, indeed, by the external senses, which cannot perceive it, but by the internal sense, that is self-consciousness. Not only so, but we must seek in a scientific manner to find out the objects which it looks at and makes known to us. In short, we have to con-

struct the science of metaphysics by a process of inductive observation suited to the nature of the mental phenomena which are observed. Without such a careful inspection our metaphysics would certainly fall into error, being sometimes extravagant, at other times defective, and at all times confused. But as we proceed by internal observation, we shall discover truths which go down deeper and rise higher than those of physics. As we advance, we shall see that there is a fundamental difference between the generalizations of our intuitive convictions and those of the ordinary facts of experience.

CHAPTER II.

THREEFOLD ASPECTS OF INTUITIVE TRUTHS.

I.

They are Perceptions looking directly at Things. We perceive body within our frame, or beyond it, by the senses. We perceive self or mind in its present state, whatever that happens to be, by self-consciousness. We find each of two sticks to be equal to a third stick, and we at once decide that they are equal one to the other without measuring them. We are told of a boy telling the truth when it might have saved him from punishment to tell a lie, and we declare the act to be good.

Under this aspect the intuitions are before the consciousness. We feel them working. We know what the operations are. In this view they are called intuitions, primitive perceptions, native convictions, and, more loosely, innate ideas, beliefs, and judgments.

II.

They are Regulative Laws or Principles guiding the mind. Under this aspect they are not before the consciousness till they come into exercise as perceptions. But perceptions come forth so constantly and are so uniform in their nature that they imply a law or power in the mind from which they proceed. This lies deep down in the mind, is indeed of the very essence of the mind, and is abiding; it abides as long as the mind abides, and is ever ready to act on the objects to which it refers presenting themselves.

To illustrate this: The senses do not perceive the law of gravitation, they only see its acts; but the power is there in all body, and is ever acting. So it is with our intuitions: we are not conscious of them as principles. We are conscious of their exercises, and argue that there must be internal laws which regulate them. Under this aspect they may be compared to seeds sending unseen roots downwards, and bearing branches and branchlets, leaves and fruit, upwards. They are often spoken of as latent, but ready to appear. The full truth was enunciated by Aristotle (*De Anim.* III. 4), Plato had spoken of the soul as νοητὸς τόπος, — the place of intelligence. Adopting this view, Aristotle calls the soul the depository of principles which are not in action, but in capacity, οὔτε ἐντελέχεια ἄλλα δυνάμει τὰ εἴδη. In this view they are in all men. It may be no easy work to enunciate them, but they are ruling in the mind. It has been found very difficult to state precisely the law of cause and effect, but all human beings, including children and savages, act upon it.

So considered, our intuitions are properly characterized as first principles, fundamental laws of thought and belief, innate truths, a priori truths.

III.

They may take the form of Maxims or Axioms. So viewed, they are formed from our primitive perceptions, by a process of abstraction and generalization. We have the best examples of this in the axioms (κοιναὶ ἔννοιαι) of Euclid, and in the commandments of the moral law, such as the Decalogue and the Sermon on the Mount.

In this form they are not known by all men. Of the millions of people on the earth, including infants, children, savages, and the uneducated masses, there are

comparatively few who fashion or employ such generalized principles. We do not need them to be so formulated in order to act upon them. Every human being, if he sees an object before him, say a house, will refuse his assent to the assertion that it does not exist; but how few beyond the limited circle of professed metaphysicians and logicians have consciously before them the principle that "it is impossible for the same thing to be and not to be at the same time!"

Under this aspect they are properly designated as κοιναὶ ἔννοιαι, πρῶται ἔννοιαι, πρῶτα μοήματα, naturæ judicia, maxims and axioms.

IV.

These are only diverse aspects of the fundamental powers of human intelligence. They constitute a philosophic trinity, one in three and three in one. They appear first in consciousness as primary perceptions which look immediately on things. These imply principles which lead to the perceptions. The perceptions may be generalized and enunciated as laws. Till this is done they cannot be used in metaphysics considered as a science, or as philosophic principles. Under the second aspect they are in all men at all times, but they are not immediately perceived by the internal sense, and their nature cannot be made known to us except by careful observation of the acts, followed by abstraction and generalization. As generalized maxims they may be used as philosophic principles, but as such they are known only to a few, and they can be employed in discussion only when their law has been gathered by induction and properly expressed. While there should be no disputes as to the immediate convictions, there may be legitimate discussion as to whether they have been correctly generalized into axioms.

In order to avoid confusion and the mistakes which proceed from confusion, it is essential that we go around these three sides of the shield, that we carefully distinguish them and read the inscription on each. Any one neglecting to do this will be liable to affirm of intuition under one aspect what is true of it only under another, and to turn the wrong side towards the weapons of the assailant and keep the wrong side towards himself. It could be shown that many of the errors in metaphysics, both in its affirmations and denials, arise from looking at one or at only two of these aspects instead of looking at the whole. Most authors have not carefully noticed the difference between primitive perceptions which are singular and maxims which are universal. Locke looked upon them as ideas or perceptions in consciousness, and easily showed that they are not innate.

The grand philosophic question discussed in the ages of Descartes, 1599–1650, and Locke, 1632–1704, was, Are there innate ideas? Descartes (and Herbert of Cherbury, 1581 – 1618) affirmed and Locke denied the existence of such ideas. The discussion was a confused one owing to the use of the word idea. Certain negative principles may be laid down. There are no innate ideas in the sense I. of images or phantasms, say of a good God or a good man; nor II. of an abstract or general notion, such as goodness or the good; nor III. of forms imposed on things by the mind, as was maintained by Kant. See the subject discussed in "Intuitions of the Mind," Part First, Book I. Chap. I. It is the aim of this treatise to show in what sense or senses there are intuitions in the mind.

CHAPTER III.

TESTS OF INTUITIVE TRUTHS.

I.

THE truths discovered at once by looking at things are called Intuitive. But how are we to know such truths, and distinguish them from other truths of observation or inference, or from propositions which are false? Are we entitled to appeal when we please, and as we please, to supposed infallible principles? Have we the privilege, when we are determined to adhere to a favorite opinion, to declare that we see it, that we feel it, to be true, and thus get rid of all objections, and even of the necessity of instituting an examination? When hard pressed in argument, may we fall back on an original conviction which we assume without evidence, and declare to be beyond the power of refutation? I believe we can furnish decisive tests of fundamental truths.

II.

Self-evidence is the Primary Mark of intuitive truth. It is evident on the bare inspection of the object. We perceive it to be so and so; we see it to be so at once without requiring any foreign evidence or mediate proof. That the planet Mars is inhabited, or that it is not, is not a first truth, is not a primitive truth, for it is not evident on the bare contemplation of the planet. That the isle of Madagascar is inhabited, though a truth, is not a primary truth; we believe it on secondary testimony. Nay, that the three angles of a triangle are

together equal to two right angles is not seen to be true at once; it needs other truths coming between to prove it. But that there is an extended object before me when I look at a wall or a table; that I who look at the object exist; that two marbles added to two marbles here are equal in number to two marbles added to two marbles there, — these are truths seen to be true on the bare contemplation of the things, and need no extraneous consideration to establish them.

III.

Necessity is a Secondary Mark. I must give my assent to the proposition, if I understand it. I cannot be made to believe the opposite. When a proposition is self-evident, necessity always attaches to our conviction regarding it. I am not inclined to fix on this as the original or essential characteristic. I shrink from maintaining that a proposition is true because it must be believed. A proposition is true as being true, and certain truths are seen by us to be self evidently true. I would not ground the evidence on the necessity of the belief: I would ascribe the irresistibility of the conviction to the self-evidence.

IV.

Catholicity, or universality of belief, is a Tertiary Test, that is, the conviction is entertained by all men when the objects are presented to the mind and apprehended. I am not disposed to use this, which has often been done, as the primary test. For in the first place it is not easy to determine in every case what propositions may claim the common consent of humanity. Even though this could be determined, it might be urged in the second place that this proves, not that the truth is

necessary, but simply that it is native. Catholicity conjoined with necessity may settle very readily and authoritatively whether a truth is fundamental.

But it is necessary to explain that these tests apply directly to intuitions only under the aspect of Perceptions. As the Regulative principles are not under the view of consciousness, it is only by noticing and generalizing our perceptions that we can know what these Regulative principles are. Again, there is a process of generalization implied in all axioms, and this process is not intuitive. The tests apply to the regulative principles, and the axioms only so far as they have been properly drawn from the perceptions, which, I may remark, is the most important and difficult task which Metaphysics has to undertake. We are beginning to get a glimpse of the way in which errors, as they so often do, enter into philosophic speculation.

Aristotle fixes on each of these three tests, and puts them in various forms, but does not systematically arrange them as I have tried to do. He fixes on self-evidence and independence as marks of what he calls first truths and principles. He speaks of their being necessary principles, and of these being inherent in things. He appeals to Catholic consent, adding that they who reject this faith will find nothing more trustworthy. Leibnitz dwells on Necessity as the test. Kant joined to this universality. Locke allows us no intuition of things, but gives us an intuition of the relation of ideas, and the test of this is self-evidence. The Scottish School of Reid and Stewart appeals constantly to the principles above enunciated, but they do not enunciate them definitely, or distinguish between them. Schelling's appeal is to intuition (Anschauung). Hegel's is to reason. (See Supplementary Chapter appended to Part I. of this work.)

CHAPTER IV.

THE SPONTANEOUS AND REFLEX USE OF INTUITION.

From the account which has been given of the Intuitions, it appears that they may operate — indeed, they are ever operating — of their own accord, and without our prompting them into exercise by any voluntary act; and it appears, too, that we may generalize the individual actings, discover the rule of their operation, and then proceed to use them in deduction and in speculation. The former of these may be called the Spontaneous Action, and the latter the Reflex Application of the Intuitions. In their spontaneous exercise they are regulating principles, regulating thought and belief, and operating whether we observe them or no. But in this operation our convictions all relate to singulars, and so cannot be directly used in philosophic speculation. In order to their scientific application, there is need of careful reflex observation and generalization.

The intuition in its reflex abstract or general form is derived from and is best tested by the concrete spontaneous conviction. In order to the formation of the definition or axiom, we must have objects or examples before us. In all circumstances the most decisive means of testing logical and metaphysical principle is by the application of it to actual cases, which should be as numerous and varied as possible. It is when appropriate examples are before us that we are able to appreciate the meaning of the general formulæ (*a*). It is only when we have considered them in their application to a number of diversified instances that we are in circumstances to pro-

nounce them to be probably, approximately, or altogether correct.

In their spontaneous action the intuitions never err, properly speaking; but there may be manifold mistakes lurking in their reflex form and application. I have used the qualified language that, *properly speaking*, they do not err in their original impulses; but even here they may carry error with them. They look to a representation given them, and this representation may be erroneous, and error will appear in the result. The mind intuitively declares that on a real quality presenting itself, it must imply a substance; but what is not truly a quality may be represented as a quality, and then it is declared that this quality implies a substance. Thus Sir Isaac Newton and Dr. S. Clarke represented time and space as qualities (which I regard as a mistake), and then represented reason as guaranteeing that these qualities implied a substance in which they inhere, which is God. But the error in such cases cannot legitimately be charged on the intuition, which is exercised simply in regard to the presentation or representation made to it. But there is room for innumerable errors creeping into the abstract or general enunciation, and the scientific application of it. For we may have made a most defective, or exaggerated, or totally inaccurate abstraction or generalization of the formula out of the individual exercises, or we may employ it in cases to which it has no legitimate reference. From such causes as these have sprung those oversights, exaggerations, and not unfrequently glaring and pernicious errors, which have appeared in every form of metaphysical speculation.

(*a*) Kant has laid down a very different maxim, declaring that examples only injure the understanding in respect of the correctness and precision of the apprehension. Speaking of examples: "Denn

was die Richtigkeit und Präcision der Verstandeseinsicht betrifft, so thun sie derselben vielmehr gemeiniglich einigen Abbruch, weil sie nur selten die Bedingung der Regel adäquat erfüllen (als *casus in terminis*), und überdies diejenige Anstrengung des Verstandes oftmals schwächen, Regeln im Allgemeinen, und unabhängig von den besonderen Umständen der Erfahrung, nach ihrer Zulänglichkeit, einzusehen, und sie daher zuletzt mehr wie Formeln, als Grundsätze, zu gebrauchen angewöhnen" (*Krit. d. r. V.* Trans. Log. p. 119; Rosen.). This shows that Kant had no correct idea of the way in which the general rule is reached. The same view is evidently taken by many of the formal logicians of our day.

CHAPTER V.

SOURCES OF ERROR IN METAPHYSICAL SPECULATION.

ALL proposed metaphysical principles are attempted expressions of the intuitions in the form of a general law. Now, error may at times spring from the assumption of a principle which has no existence whatever in the human mind. I am persuaded, however, that the mistakes thus originated are comparatively few, and are seldom followed by serious consequences. In regard to the assumption of totally imaginary principles, I am convinced that there have been fewer blunders in metaphysical than in physical science. As the intuitions of the mind are working in every man's bosom, it will seldom happen that the speculator can set out with a principle which has no existence whatever; and should he so venture, he would certainly meet with little response. It is possible also for error to arise from a chain of erroneous deduction from principles which are genuine in themselves and soundly interpreted. The mistakes springing from this quarter are likewise, I believe, few and trifling, the more so that those who draw such inferences are generally men of powerful logical mind, and not likely to commit errors in reasoning; and if they do, those who have ability to follow them would be sure to detect them. By far the most copious source of aberration in philosophic speculation is to be found in the imperfect, or exaggerated, or mutilated expression of principles which really have a place in our constitution. In such cases the presence of the real metal gives currency to the dross which is mixed with it.

In regard to many of our intuitions, the gathering of the common quality out of the concrete and individual manifestations is as subtle a work as the human understanding can be engaged in. This arises from the recondite, the complicated, and fugitive nature of the mental states from which they must be drawn. But from the very commencement of speculation and the breaking out of discussion, attempts have been made to give a body and a form to the native convictions. It is seldom that the account is altogether illusory; most commonly there is a basis of fact to set off the fiction. But the principle is seen and represented only under one aspect, while others are left out of sight. It often happens that those whose intuitions are the strongest and the liveliest are of all men the least qualified to examine and generalize them, and should they be tempted to embody them in propositions, they will be sure to take distorted, perhaps erroneous, forms. In all departments of speculation, metaphysical, ethical, and theological, we meet with persons whose faith is strong, whose sentiments are fervent, and whose very reason is far-seeing, but whose creed — that is, formalized doctrine — is extravagant, or even perilously wrong. In other cases the conviction, genuine in itself, is put forth in a mutilated shape by prejudiced men to support a favorite doctrine, or by party men to get rid of a formidable objection.

The human mind is impelled by an intellectual craving, and by the circumstances in which it is placed, to be ever generalizing, and this in respect both of material and mental phenomena. But the earliest classes and systems, even those of them made for scientific purposes, are commonly of a very crude character. Such laws as these have been laid down: "Nature abhors a vacuum;" "Some bodies are naturally light, and others

heavy;" "Combustible bodies are chemically composed of a base with phlogiston combined;" "The organs of the flower are transformed leaves."

These are examples from physical science. Metaphysical science, from the subtle and intertwined nature of the phenomena, can furnish far more numerous instances. In mental philosophy the general statements have commonly a genuine fact, but mixed with this there is often an alloy. The error may not influence the spontaneous action of the primitive principle, but it may tell disastrously or ludicrously in the reflex application. It may not even exercise any prejudicial influence in certain departments of investigation, but in other walks it may work endless confusion, or land in consequences fitted to sap the very foundations of morality and religion. Take the distinction drawn, in some form, by most civilized languages between the head and the heart. The distinction embodies a great truth, and when used in conversation or popular discourse it can conduct to no evil. But it cannot be carried out psychologically. For in each a number of very distinct faculties are included. Under the phrase "heart," in particular, are covered powers with wide diversities of function, such as the conscience, the emotions, and the will. The question agitated in this century, whether religion be an affair of the head or the heart, has come to be a hopelessly perplexed one, because the offices of the powers embraced under each are diverse, and run into each other; and certain of the positions taken up are, to say the least of it, perilous: as when it is said that religion resides exclusively in the heart, and persons understand that it is a matter of mere emotion, omitting understanding, will, and conscience, which have equally a part to play. Of the same description is the distinc-

tion between the reason and the understanding. It points to a reality. There is a distinction between reason in its primary, and reason in its secondary, or logical, exercises, and the mind can rise, always, however, by a process in which the logical understanding is employed, to the discovery of universal and necessary truth. But each of the divisions, the reason and the understanding, comprises powers which run into the other. This distinction is at the best confusing, and it is often so stated as to imply that the reason, without the use of the understanding processes of abstraction and generalization, can rise to the contemplation of the true, the beautiful, and the good. Almost all metaphysical errors have proceeded from the improper formalization of principles which are real laws of our constitution. When presented in a mutilated shape, even truth may lead to hideous consequences. Suppose that the law of cause and effect be put in the form that "every thing has a cause," it will issue logically in the conclusion that God himself must have a cause. This consequence can be avoided only by the proper enunciation of the law that "every thing that begins to be has a cause."

There is another circumstance to be taken into account by those who would unfold the theory of the metaphysician's extravagances; he is not restrained, as the physical investigator is, by stubborn facts, nor checked, as the commercial man is, by stern realities, which he dare not despise. He has only to mount into a region of pure (or rather, I should say, cloudy) speculation, to find himself in circumstances to cleave his way without meeting with any felt barrier. At the same time one might have reasonably expected that when such speculators as Spinoza, Fichte, Schelling, and Hegel felt themselves rushing headlong against all acknowl-

edged truth, they would have suspected that there was something wrong in the assumptions with which they set out and in the method which they followed. Whenever metaphysical assumptions or speculations run counter to the established truths of physical science; whenever they lead to the denial of the distinction between good and evil, or the personality of the soul, or of the existence, of the personality, and continual providence of God, it is time to review the process by which they have been gained, for they are running counter to truths which have too deep a foundation to be moved by doubtful speculations. The remark of Bacon as to physical, may be applied to metaphysical, speculation, that doctrine is to be tried (not valued, however) by fruits: "Of all signs there is none more certain or worthy than that of the fruits produced; for the fruits and effects are sureties and vouchers, as it were, for philosophy." "In the same manner as we are cautioned by religion to show our faith by our works, we may freely apply the principle to philosophy, and judge of it by its works, accounting that to be futile which is unproductive, and still more, if instead of grapes and olives it yield but the thistles and thorns of dispute and contention."

CHAPTER VI.

ERRONEOUS VIEWS OF INTUITION.

I.

THEY are spoken of as Instincts. By instinct animals perform acts of the meaning of which they are ignorant. Some of them lay up food in summer for nourishment in winter, of which they can have only an imperfect idea. Our intuitive perceptions are sometimes supposed to be much of the same character. And no doubt they are so, inasmuch as both are native and original. But they differ in a most essential point. Instincts are blind, not perceiving the signification of the acts which they perform. On the other hand, intuitions are cognitive, furnishing the deepest, the most certain, and properly understood, the clearest of all our knowledge.

II.

They are regarded as of the nature of Loose Beliefs which we have no decisive evidence to support, very much like the persuasion we are apt to cherish that the planets are inhabited. Under this view they would be a weakness rather than a strength in our constitution. It is true that the mind is capable, as we shall see, of entertaining primitive beliefs; but of these we shall show that we have tests which are clear and certain, which make them entirely different from fondled fancies. Our intuitions, whether cognitions or beliefs, have the strongest of all evidence in their behalf. The evidence is in the objects, which we perceive as we gaze

upon them: it is thus that we know body as extended and mind as thinking, and believe that we cannot move from one place to another without passing through all the intermediate points.

III.

We are not to regard the mind as possessing a power of Reason looking directly on general Principles and Axioms. No doubt God could have so fashioned us as to enable us to do this. Had he so chosen he could have made us capable of perceiving directly the law of gravitation, and other powers in nature, but he has seen fit instead to give us the power of observing the individual operations, say the fall of an apple, and thence to rise to the discovery of the law. So in metaphysics we have only the power of individual intuition, and it is by induction of the single operations that we rise to the discovery of the necessary truth.

IV.

It is important at this early stage to announce that I mean to prove as we advance that our intuitions are not of the nature of Forms imposed on things by the mind. This is the view taken by that powerful thinker Immanuel Kant, who for the last century has so powerfully swayed philosophic thought, not only in Germany, but wherever in Europe or America there are reflecting minds. When we look on external objects we view them as in space and occupying space, which space is supposed to be superinduced upon them by the mind. In opposition I hold that we are so constituted as to behold things as they are: we behold bodies in space, both the bodies and the space being realities (*a*).

(*a*) An age ago it was of all things the most important to point out the errors of Locke. Throughout this treatise I am opposing

his view that all truth is gained by a gathered experience. In this age it is more important to point out the errors of Kant. In both cases there should be an acknowledgment of the great truths which these two profound thinkers have established. Kant errs, I., in proceeding in the Critical instead of the Inductive method. He errs, II., in holding that we know merely Phenomena in the sense of Appearances and not Things. He errs, III., in maintaining that the mind knows things, not as they are, but under Forms which we impose upon them.

V.

It is of special importance in the present day to show that it is wrong to represent self-evident truths as being truths merely to the individual, or truths merely to man, or beings constituted like man. There are some who speak and write as if what is truth to one man might not be truth to another man, as if what is truth to man might not be truth to other intelligent beings. This account might be correct if the intuitive convictions were mere creatures of the mind, or borne in upon it by a blind natural impulse. But I have been laboring to show that our intuitions are intuitions or cognitions of things. They must be the same in all beings who know the things. In this view truth is immutable and eternal. It is a truth whether I perceive it or not, whether other intelligences perceive it or not. It is a truth to me because I am so constituted as to know things. It is a truth not merely to me or to you, but to all men: not only to all men, but to all intelligences capable of knowing the things. That two straight lines cannot inclose a space is a truth at all times and in all places, in the planet Mars as well as in the planet Earth. That ingratitude is morally evil must hold true in all other worlds as in this world of ours, where sin so much abounds.

It is thus that we meet those who, like Herbert Spencer, assuming that our intuitions are developed, argue that their authority is thereby undermined. We show that however produced, they are intuitions of things. This is shown at the close of this volume.

CHAPTER VII.

LEGITIMATE USE OF FIRST PRINCIPLES.

I.

THE grand aim of Metaphysics should be to construct a science of First Principles, that is, principles prior to experience, by the method of induction with self-consciousness as the agent of observation. In conducting this work it should first seek out these principles from amidst the other operations of the mind, separate them from these, and then determine precisely their modes of operation, and their laws. Throughout it should show what is the right application of these principles, and thus determine the use of Metaphysics.

There is only one rule as to the spontaneous employment of first principles, and this is to determine to have no other end in view than to discover the truth, and then we are sure that the intuitions will act aright. But there may be anxious questions as to their reflex use in philosophic investigation.

II.

When we employ them we should show by a careful inspection and the appropriate tests that they are first truths. Unless we do so we may be tempted to use the limited laws of experience as if they were necessary and universal truths. One man will say, I am sure the earth does not move; I feel it to be stable. Another will tell you that he is not so silly as to believe in antipodes in which people stand with their heads downwards. A

third emphatically affirms, I cannot believe that God will inflict everlasting punishment on any man, however wicked; my whole nature shrinks from it. Now we have only to apply the tests of intuition to such assertions to find that we are not entitled to assume them.

III.

In employing first truths we should let it be known that we are doing so, and we should enunciate them accurately, at least so far as to show that we are not making an illegitimate application of them. Without this we may be employing an incongruous mixture of necessary and experiential truth, and using the first to impart a certainty to the other.

IV.

This science of Metaphysics should furnish what Kant says was the end he had in view in his great work, the "Kritik of Pure Reason," an inventory of what he called the a priori truths of the mind. It should seek to classify them judiciously, and put them under convenient heads, logically constructed. It would certainly be of immense use to have a carefully prepared summary of the various truths which can stand the tests of intuition, and which may therefore be employed in every department of inquiry without the necessity of continually stopping to explain and defend them in the midst of a very different investigation or discussion. This is what is attempted in the Second Part of this treatise.

It will be shown that primitive truths are involved even in the practical affairs of life, and in all the deeper sciences. Metaphysics should show how they are to be applied to the various branches of investigation. This is attempted in Part Third.

The author is aware that he is only beginning this important work. What he enunciates may be truth only provisionally. He feels deeply that it may admit of correction and improvement. What he has commenced in good faith he hopes may be completed by others, to the great advantage not only of Metaphysics, but of all branches of science.

The intuitions are

INTELLECTUAL AND MORAL,

each subdivided into

PRIMITIVE COGNITIONS, BELIEFS, AND JUDGMENTS.

It is not easy to determine the precise philosophy of the Sophists, if indeed they had a philosophy. The doctrine of Heracleitus was that all is and is not; that while it does come into being, it forthwith ceases to be. Protagoras, proceeding on this doctrine, declared, *Φησὶ γάρ που πάντων χρημάτων μέτρον ἄνθρωπον εἶναι, τῶν μὲν ὄντων, ὡς ἔστι, τῶν δὲ μὴ ὄντων, ὡς οὐκ ἔστιν.* This Socrates expounds as meaning *ὡς οἷα μὲν ἕκαστα ἐμοὶ φαίνεται, τοιαῦτα μέν ἐστιν ἐμοί, οἷα δὲ σοί* (Plato, *Theœtetus*, 24: Bekker). Aristotle represents Protagoras as maintaining that *τὰ δοκοῦντα πάντα ἐστὶν ἀληθῆ καὶ τὰ φαινόμενα* (*Metaph.* Lib. III. Chap. v.: Bonitz). Again, Lib. X. Chap. vi., this *καὶ γὰρ ἐκεῖνος ἔφη πάντων χρημάτων εἶναι μέτρον ἄνθρωπον, οὐθὲν ἕτερον λέγων ἢ τὸ δοκοῦν ἑκάστῳ τοῦτο καὶ εἶναῖ παγίως.* It will be observed that in these accounts there is an interpretation put on the language of Protagoras. But there can be no doubt that Plato, and Aristotle too, labored each in his own way to show, in opposition to these views, that there was a reality and a truth independent of the individual and of appearance. It is an instructive circumstance that the Sensationalist school have reached in our day the very position of the Sophists, and regard it as impossible to reach independent and necessary truth, if indeed any such truth exists. We might expect that these men would seek to justify the Sophists, and disparage the high arguments of Plato. Cudworth, speaking of the theoretical universal propositions in geometry and metaphysics, has finely remarked that it is true of every one of them whenever "it is rightly understood by any particular mind, whatsoever and wheresoever it be; the truth of it is no private thing, nor relative to that

particular mind only, but is ἀληθὲς καθολικόν, 'a catholic and universal truth,' as the Stoics speak, throughout the whole world; nay, it would not fail to be a truth throughout infinite worlds, if there were so many, to all such minds as would rightly understand it." (*Immutable Morality*, Book IV. Chap. v.)

CHAPTER VII.

(SUPPLEMENTARY.)

BRIEF CRITICAL REVIEW OF OPINIONS IN REGARD TO INTUITIVE TRUTHS.

I. THE PRE-SOCRATIC SCHOOLS OF GREECE. — The Greek philosophers who flourished in the fifth and sixth centuries before Christ, if they did not exactly discuss, did, at least, start the question of man's native power of intuition. The Ionian School, founded by Thales, and continued by Anaximander, Anaximenes, and others, dwelling among material elements, found only the mutable and the fleeting; till at length it was laid down systematically by Heracleitus, that all things are in a state of perpetual flux, under the power of an ever-kindling and ever-extinguishing fire. Running to the opposite extreme, the Eleatic School, of which Xenophanes, Parmenides, and Zeno were the most illustrious masters, appealed altogether from sense (αἴσθησις) and opinion (δόξα) to reason (λόγος); fixed its attention on this abiding nature of things beneath all mutation; dived into profound, but over-subtle, and often confused and quibbling disquisitions regarding Being; and ended by making all things so fixed that change and motion became impossible. It was in the very midst of the collision of these sects that Socrates was reared. Professing to have only a practical aim in view, he yet, in putting down the opposition to that end, indulged in all the subtlety of a Greek intellect, and thus stimulated the dialectic spirit of his pupil Plato, who sought to harmonize the fleeting and the fixed.

II. PLATO. — It would be altogether a mistake to suppose, as some have done, that Plato is forever inquiring into the origin of ideas in the mind, like the metaphysicians who came after Descartes and Locke. His aim was of a character loftier and wider, but more

unattainable by the cogitation of one thinker, or indeed by cogitation at all. Nor was it his object to discover the absolute, as if he had been reared in the schools of Schelling or Hegel. His grand aim was to discover the real (τὸ ὄν) and the abiding, amidst the illusions of sense and the mutations of things. And in following this end he sought prematurely to determine questions which can be settled only by a long course of patient induction, carried on by a succession of observers of the world without and the world within. But in the search he started many deep views of God, of man, and of the world, which have been established by the Bible, and by inductive mental and physical science. 1. He everywhere proceeds on the doctrine that man is possessed of a power of reason (λόγος, or νοῦς, or νόησις) above sense, or faith, or understanding (διάνοια). 2. This reason contemplates ideas (ἰδέαι, or εἴδη) supra-sensible, immutable, eternal, which ideas are realities. 3. He sees that there is a process of thought, especially of abstraction, in order to the mind rising to these ideas: τὸ ὄν is represented as νοήσει μετὰ λόγου περιληπτὸν (*Tim.* 29). 4. The discovery of these ideas should be the special aim of the philosopher, and the gazing on them the highest exercise of wisdom. But Plato moves above our earth like the sun, with so dazzling a light that we feel unable, or unwilling, to look too narrowly into the exact body of truth which sheds such a lustre. 1. He has given a wrong account of the reality in those eternal ideas, making them the only realities; denying reality to the objects of sense, except in so far as they partake of them, and seeming to make them independent even of the Divine Mind. 2. Under the one phrase "idea" he gathers an aggregate of things which require to be distinguished, — such as the true, the beautiful, the good, unity and being, natural law and moral law, the forms of objects, and even the universals fashioned arbitrarily by the mind. By heaping together and confounding all these things which should be carefully distinguished, he has given a grandeur to his views, but at the expense of clearness and accuracy. 3. He does not see that ideas exist naturally in the mind merely in the form of laws or rules. To account for them he is obliged to suppose that the soul preëxisted, and that the calling up of the ideas is a sort of reminiscence. 4. He does not see how the mind reaches them in their abstract, general, or philosophic form. He does not observe that the mind begins with the knowledge of particular objects, and must thence rise by induction to generals. He thus lays himself open to the assaults, always acute, often just, at times captious, of Aristotle, who saw that the

general exists in the individuals, and that it is from the singulars that man rises to the universals (*Metaph.* i. 9). 5. He attaches an extravagant value to the contemplation of these ideas in their abstract and general form. Overlooking the other purposes served by ideas, and their indissoluble connection with singulars, — forgetting that philosophy consists in viewing law in relation to its objects, — he represents the mind as in its highest exercise when it is gazing upon them in their essence, formless and colorless: Ἡ γὰρ ἀχρώματός τε καὶ ἀσχημάτιστος καὶ ἀναφὴς οὐσία ὄντως οὖσα ψυχῆς κυβερνήτῃ, μόνῳ θεατῇ νῷ χρῆται· περὶ ἣν τὸ τῆς ἀληθοῦς ἐπιστήμης γένος τοῦτον ἔχει τὸν τόπον (*Phædrus*, 58). He thus prepared the way for the extravagances of the Neoplatonist School of Plotinus and Proclus, who reckoned the mind as in its loftiest state when under intuition or ecstasy which looks on the One and the Good, and who found, I believe, the gazing idle and unprofitable enough.

III. Aristotle. — His views, if not so grand as those of Plato, are much more sober and definite. He has specified most of the separate characteristics of intuition, but I have not been able to find how he reconciles his several statements. 1. He has a power, or faculty, called Νοῦς, which he represents as concerned with the principles of thought and being: Ὁ νοῦς ἐστὶ περὶ τὰς ἀρχὰς τῶν νοητῶν καὶ τῶν ὄντων (*Mag. Mor.* i. 35). Elsewhere he shows that it cannot be φρόνησις, nor σοφία, nor ἐπιστήμη, but νοῦς, which has to do with the principles of science: Λείπεται νοῦν εἶναι τῶν ἀρχῶν (*Eth. Nic.* vi. 6; ed. Michelet). 2. He fixes on self-evidence and independence as tests of what he calls first truths and principles. First truths are those whose credit is not through others, but of themselves: Εστι δ' ἀληθῆ μὲν καὶ πρῶτα τὰ μὴ δι' ἑτέρων ἀλλὰ δι' αὐτῶν ἔχοντα τὴν πίστιν· οὐ δεῖ γὰρ ἐν ταῖς ἐπιστημονικαῖς ἀρχαῖς ἐπιζητεῖσθαι τὸ διὰ τί, ἀλλ' ἑκάστην τῶν ἀρχῶν αὐτὴν καθ' ἑαυτὴν εἶναι πιστήν (*Top.* i. 1; ed. Waitz.) 3. He fixes on necessity as a test. Thus he speaks of necessary principles, and of their being inherent in things: Εἰ οὖν ἐστὶν ἡ ἀποδεικτικὴ ἐπιστήμη ἐξ ἀναγκαίων ἀρχῶν (ὁ γὰρ ἐπίσταται, οὐ δυνατὸν ἄλλως ἔχειν), τὰ δὲ καθ' αὑτὰ ὑπάρχοντα ἀναγκαῖα τοῖς πράγμασιν, κ. τ. λ. (*Anal. Post.* i. 6). Τὰ ἐξ ἀναγκῆς ὄντα ἁπλῶς ἀΐδια, πάντα τὰ δ' ἀΐδια ἀγένητα καὶ ἄφθαρτα (*Eth. Nic.* vi. 3). 4. In which passage eternity is spoken of as a characteristic of necessary truth. 5. It is a favorite maxim with him that everything cannot be proven. He says that all science is not demonstrative, that the science of things immediate is undemonstrable; for as all demonstration is from things prior, we must, at last, arrive at things immediate which are not demonstrable: Ἡμεῖς δέ φαμεν, οὔτε

πᾶσαν ἐπιστήμην ἀποδεικτικὴν εἶναι, ἀλλὰ τήν τῶν ἀμέσων ἀναπόδεικτον· καὶ τοῦθ' ὅτι ἀναγκαῖον, φανερόν· εἰ γὰρ ἀνάγκη μὲν ἐπίστασθαι τὰ πρότερα καὶ ἐξ ὧν ἡ ἀπόδειξις, ἵσταταί δέ ποτε τὰ ἄμεσα, ταῦτ' ἀναπόδεικτα ἀνάγκη εἶναι (*Anal. Post.* i. 3); see also i. 22, where he says there must be principles of demonstration: τῶν ἀποδείξεων ὅτι ἀνάγκη ἀρχὰς εἶναι. He speaks of science and demonstration carrying us to intuition, νοῦς (*Ib.* i. 23); see also ii. 19, where νοῦς is said to give principles: νοῦς ἄν εἴη τῶν ἀρχῶν. He blames those who seek for a reason of those things of which there is no reason: λόγον γὰρ ζητοῦσιν ὧν οὐκ ἔστι λόγος (*Metaph.* iii. 6). 6. He appeals to catholic consent, adding that those who reject this faith will find nothing more trustworthy: ὅ γὰρ πᾶσι δοκεῖ, τοῦτ' εἶναί φαμεν· ὁ δ' ἀναιρῶν ταύτην τὴν πίστιν οὐ πάνυ πιστότερα ἐρεῖ (*Eth. Nic.* x. 2). 7. He draws the distinction between two classes of truths. We believe all things, either through syllogism or from induction: ἅπαντα γὰρ πιστεύομεν ἢ διὰ συλλογισμοῦ ἢ ἐξ ἐπαγωγῆς (*Anal. Prior.* ii. 23). To nature, the syllogism is the prior and the more known; but to us, that which is through induction is the more palpable: Φύσει μὲν οὖν πρότερος καὶ γνωριμώτερος ὁ διὰ τοῦ μέσου συλλογισμός, ἡμῖν δ' ἐναργέστερος ὁ διὰ τῆς ἐπαγωγῆς (*Ib.*; compare *Eth. Nic.* vi. 3). In explaining this, he says that he calls "things prior and more knowable to us" those which are nearer to sense, and "things prior and more knowable simply" those which are more remote; but those things which are universal belong to the most remote, and those which are singular, to the nearest: Λέγω δὲ πρὸς ἡμᾶς μὲν πρότερα καὶ γνωριμώτερα τὰ ἐγγύτερον τῆς αἰσθήσεως, ἁπλῶς δὲ πρότερα καὶ γνωριμώτερα τὰ πορρώτερον· ἔστι δὲ πορρωτάτω μὲν τὰ καθόλου μάλιστα, ἐγγυτάτω δὲ τὰ καθ' ἕκαστα (*Anal. Post.* i. 2). But the question is started, How does the human mind, which must begin with the singulars, as better known to it, reach the universal? He seems to say, in the following passage, we reach universal truth through induction: Μανθάνομεν ἢ ἐπαγωγῇ ἢ ἀποδείξει· ἔστι δ' ἡ μὲν ἀπόδειξις ἐκ τῶν καθόλου, ἡ δ' ἐπαγωγὴ ἐκ τῶν κατὰ μέρος· ἀδύνατον δὲ τὰ καθόλου θεωρῆσαι μὴ δι' ἐπαγωγῆς, ἐπεὶ καὶ τὰ ἐξ ἀφαιρέσεως λεγόμενα ἔσται δι' ἐπαγωγῆς γνώριμα ποιεῖν, ὅτι ὑπάρχει ἑκάστη γένει ἔνια, καὶ εἰ μὴ χωριστά ἐστιν, ᾗ τοιονδ' ἕκαστον· ἐπαχθῆναι δὲ μὴ ἔχοντας αἴσθησιν ἀδύνατον· τῶν γὰρ καθ' ἕκαστον ἡ αἴσθησις· οὐ γὰρ ἐνδέχεται λαβεῖν αὐτῶν τὴν ἐπιστήμην· οὔτε γὰρ ἐκ τῶν καθόλου ἄνευ ἐπαγωγῆς, οὔτε δι' ἐπαγωγῆς ἄνευ τῆς αἰσθήσεως (*Ib.* i. 18; cf. *Eth. Nic.* vi. 3). All these are important principles. But how does he reconcile them? How in particular does he reconcile his doctrine that universals are gained by induction with his statement as to the mind having a νοῦς which looks at principles? There are passages in his *Metaphysics* which show that such questions had been before his

mind. The question is put whether first principles are universal, or as singulars of things; and the further and most important question, whether they subsist in capacity or in energy, that is, whether they exist virtually or in act: *Ποτερον αἱ ἀρχαὶ καθόλου εἰσίν ἢ ὡς τὰ καθ' ἕκαστα τῶν πραγμάτων, καί δυνάμει ἢ ἐνεργείᾳ* (*Metaph.* ii. 1; ed. Bonitz). I have already quoted (on page 35) his declaration that the soul is the place of forms, not in readiness for action, but in capacity: *οὔτε ἐντελέχεια ἀλλὰ δυνάμει τὰ εἴδη.* In another passage he seems to answer, that those things which are predicated of individuals are first principles rather than the genera, but adds that it would not be easy to express how one should conceive these first principles: *Ἐκ μὲν οὖν τούτων μᾶλλον φαίνεται τὰ ἐπὶ τῶν ἀτόμων κατηγορούμενα ἀρχαὶ εἶναι τῶν γενῶν· πάλιν δὲ πῶς αὖ δεῖ ταύτας ἀρχὰς ὑπολαβεῖν οὐ ῥᾴδιον εἰπειν.* For this statement he gives reasons which lead him to the conclusion that the universals which are predicated of individuals are principles in the ratio of their universality, and that the very highest generalizations must be emphatically principles: *Τὴν μὲν γὰρ ἀρχὴν δεῖ καὶ τὴν αἰτίαν εἶναι παρὰ τὰ πράγματα ὧν ἀρχή, καὶ δύνασθαι εἶναι χωριζομένην αὐτῶν· μοιοῦτον δέ τι παρὰ τὸ καθ' ἕκαστον εἶναι διὰ τί ἄν τις ὑπολάβοι, πλὴν ὅτ. καθόλου κατηγορεῖται καὶ κατὰ πάντων; ἀλλὰ μήν, εἰ διὰ τοῦτο, τὰ μᾶλλον καθόλου μᾶλλον θετέον ἀρχάς· ὥστε ἀρχαὶ τὰ πρῶτ' ἂν εἴησαν γένη* (*Ib.* ii. 3). There are points of connection not brought out in this statement. But we are not rashly to charge Aristotle with an inconsistency. I believe that his statement as to first truths and syllogism and his statement as to the universality of induction are both true. But he has not drawn the distinction between first principles as forms in the mind, and as individual convictions, and as laws got by induction; nor has he seen how the self-evidence and necessity, being in the singulars, goes up into the universals when (but only when) the induction is properly formed.

IV. The Stoics were the first, so far as is known, to lay down the principle that there is nothing in the intellect which was not previously in the senses (see Origen, *contra Celsum*, Book vii.). But those who quote this statement often forget that the Stoics placed in the mind a ruling principle (*ἡγεμονικὸν*), and maintained that we have innate *ἐννοίαι* and *προλήψεις*. According to Cicero, *Topica*, they held by a notion, "insitam et ante perceptam cujusque formæ cognitionem enodatione indigentem." Diogenes Laertius represents them as maintaining *ἔστι δ' ἡ πρόληψις ἔννοια φυσικὴ τῶν καθόλου.* These two doctrines of the Stoics are not inconsistent. The supposition that they must be so led to Brucker's criticism in *Historia Critica* de

Zenone, of Lipsius' account in *Manuductio ad Stoicam Philosophiam.* It is quite conceivable that there may be a ruling principle and an anticipative notion in the mind, and yet that all our notions may arise from sense; only it is not true, as Locke has shown, that all our ideas come from sense, for many of them are derived from the inward sense or reflection. The Stoics represented the notions as "obscuras et inchoatas, adumbratas, complicatas, involutas" (Cicero, *De Legibus;* see Lipsius, *Manud.* ii. 11). In Epictetus, vii. 22, we have examples of the Stoic preconception as that good is advantageous, eligible, and to be pursued, and that justice is fair and becoming.

V. The Epicureans are usually represented as denying everything innate. But it is quite certain that they held by a προλήψις, as implied in all intelligence, investigation, and discussion: "Id est, anteceptam animo rei quandam informationem, sine qua nec intelligi quidquam, nec quaeri, nec disputari potest." This prolepsis gives a prenotion of the gods which is innate, and has in its behalf universal consent: "Cum enim non instituto aliquo, aut more, aut lege, sit opinio constituta, maneatque ad unum omnium firma consensio; intelligi necesse est, esse deos, quoniam insitas eorum, vel potius innatas, cognitiones habemus. De quo autem omnium natura consentit, id verum esse necesse est" (Cicero, *De Nat. Deorum*, i. 17).

VI. Lord Herbert of Cherbury is an original but by no means a clear thinker; he is certainly not a graceful writer. In his treatise *De Veritate*, he maintains that truth is discoverable in consequence of there being an analogy of things to our minds. He finds in the soul four faculties: 1. Natural Instinct, — "sive sensus qui ex facultatibus communes notitias confirmantibus oritur." 2. The Internal Sense. 3. The External Sense; and 4. The Discursive Power. Whatever is not revealed through these faculties cannot be known by man, but he insists that what is known is in the things, and that man can know realities. Under Natural Instinct he treats of Common Notions, κοιναὶ ἔννοιαι, and specifies six marks: 1. Their priority, the natural instinct being the first to act, and the discursive faculty the last. 2. Their independence, that is, of every other. 3. Their universality, giving universal consent. 4. Their certainty, which allows not of doubt. 5. Their necessity, which he explains as their tendency towards the preservation of men (a very unsatisfactory account of this characteristic). 6. The immediacy of their operation. His exposition of the Internal Sense is not very clear; but under it he treats of the conscience which he describes as

"sensus communis sensuum internorum," and as discovering what is good and evil, and what ought to be done. Passing over his account of the External Senses and the Discursive Power, we may mention his Common Notions about religion. They are, that there is a Supreme Deity; that he ought to be worshipped; that virtue with piety should be main part of the worship; that there is in the mind a horror of crime which should lead to repentance; and that there are rewards and punishments in another life. Under this system I would remark: *a*, that Herbert does not see that Natural Instinct runs through all the faculties; *b*, he does not accurately distinguish between Natural Instinct and the Common Notions, nor see that in the formation of the latter there is an exercise of the Discursive Power; *c*, while he has caught a vague view of the more important characteristics of our intuitions, he has not apprehended them closely, and he fails in the application of his own tests.

VII. The English Divines of the Seventeenth Century, both High Church and Puritan, often discuss the question as between Aristotle and Plato (not as between Locke and Descartes), as to the nature of ideas, and throw out views in which there is much truth, but also much confusion. They held that there is something in the mind, and born with it, which is deeper than sense and experience. Thus Dr. Jackson, in *A Treatise concerning the Original of Unbelief, Misbelief, or Mispersuasion concerning the Veritie, Unitie, and Attributes of the Deity* (1625), inquires what truth there is in the Platonic theory of ideas and reminiscence, and cannot just agree with those who maintain that there are notions in the soul like letters written with the juice of onions, and ready to come forth on certain applications being made to them. His doctrine is, "The soul of man being created after the image of God (in whom are all things), though of an indivisible and immortal nature, hath notwithstanding such a virtual similitude of all things as the eye hath of colors, the ear of sounds, or the common sense of these and other sensibles, woven by the finger of God in its essential constitution or intimate indissoluble temper." The Cambridge Platonists all maintained that there was something in the soul prior to sense, but requiring sense to call it forth, and were fond of describing this as "connate" or "connatural." H. More states the question, "Whether the soul of man be a *rasa tabula*, or whether she have innate notions and ideas in herself?" He answers, "For so it is that she having first occasion of thinking from external objects, it has so imposed on some men's judgments, that they have conceited that the

soul has no knowledge nor notion, but what is in a passive way impressed or delineated upon her from the objects of sense; they not warily enough distinguishing between extrinsical occasions and the adequate or principal causes of things." "Nor will that prove anything to the purpose when it shall be alleged that this notion is not so connatural and essential to the soul because she framed it from some occasions from without." In modification he allows, "I do not mean that there is a certain number of ideas as glaring and shining to the animadversive faculty, like so many torches or stars in the firmament to our outward sight, or that there are any figures that take their distinct places, and are legibly writ there like the red letters or astronomical characters in an almanac" (*Antidote against Atheism*). Culverwel says, "You must not, nor cannot, think that nature's law is confined and contracted within the compass of two or three common notions, but reason, as with one foot it fixes a centre, so with the other it measures and spreads out a circumference; it draws several conclusions, which do all meet and crowd into these first and central principles. As in those noble mathematical sciences there are not only some first αἰτήματα which are granted as soon as they are asked, if not before, but there are also whole heaps of firm and immovable demonstrations that are built upon them." He talks of a "connate" notion of a Deity, but then he shows that there is a process of the understanding in it, "so that no other innate light but only the power of knowing and reasoning is the 'candle of the Lord'" (*Light of Nature*, pp. 82, 127, 128. Edition by Brown and Cairns). Cudworth stands up for an immutable morality discovered by reason, and distinguishes, like More, between occasion and cause (see *infra*, Part III. Book I. Chap. ii. sect. vi.). The Puritans generally appealed to first principles, intellectual and moral. Thus Baxter says (*Reasons of the Christian Religion*, p. 1), "And if I could not answer a sceptic who denied the certainty of my judgment by sensation and reflexive intuition [how near to Locke], yet nature would not suffer me to doubt." "By my actions I know that I am; and that I am a sentient, intelligent, thinking, willing, and operative being." "It is true that there is in the nature of man's soul a certain aptitude to understand certain truths as soon as they are revealed, that is, as soon as the very *natura rerum* is observed. And it is true that this disposition is brought to actual knowledge as soon as the mind comes to the actual consideration of things. But it is not true that there is any actual knowledge of any principle born in man." It is wrong to "make it consist in certain axioms (as some

say) born in us, or written in our hearts from our birth (as others say), dispositively there." These distinctions do not exhaust the subject, but they contain important truth; and if Locke had attended to them he would have been saved from extravagant statements. Owen, in his *Dissertation on Divine Justice*, appeals, in proving the existence of justice, (1) to the "common opinion" and innate conceptions of all; (2) to the consciences of all mankind; (3) to the public consent of all nations. Howe, in his *Living Temple*, appeals to "the relics of common notions, the lively points of some undefaced truth, the fair ideas of things, the yet legible precepts that relate to practice."

VIII. DESCARTES lays hold of a large body of important truth in regard to innate ideas. 1. He sees that they are of the nature of powers or faculties ready to operate, but needing to be called forth. "Lorsque je dis que quelque idée est née avec nous, ou qu'elle est naturellement empreinte en nos âmes, je n'entends pas quelle se présente toujours à notre pensée, car ainsi il n'y en aurait aucune; mais j'entends seulement que nous avons en nous-mêmes la faculté de la produire" (*Trois Objec. Rép. Obj.* 10). See other passages to the same effect, quoted by Mr. Veitch, *Trans. of Med.* etc., pp. 207, 208. 2. He has glimpses, but confused, of the test of self-evidence, which he unhappily represents as clearness. "Toutes les choses que nous concevons clairement et distinctement sont vraies de la façon dont nous les concevons" (*Méd. Abrége*). He thus explains clearness and distinctness: "J'appelle claire celle qui est présente et manifeste à un esprit attentif; de même que nous disons voir clairement les objets, lorsqu'étant présents à nos yeux ils agissent assez fort sur eux, et qu'ils sont disposés à les regarder; et distincte, celle qui est tellement précise et différente de toutes les autres, qu'elle ne comprend en soi que ce qui paroît manifestement à celui qui la considère comme il faut" (*Prin. Phil.* i. 45). 3. He sees that they assume the shape of common notions. 4. These are represented as eternal truths of intelligence: "Lorsque nous pensons qu'on ne sauroit faire quelque chose de rien, nous ne croyons point que cette proposition soit une chose qui existe ou la propriété de quelque chose, mais nous la prenons pour une certaine vérité éternelle qui a son siége en notre pensée, et que l'on nomme une notion commune ou une maxime; tout de même quand on dit qu'il est impossible qu'une même chose soit et ne soit pas en même temps, que ce qui a été fait ne peut n'être pas fait, que celui qui pense ne peut manquer d'être ou d'exister pendant qu'il pense, et

quantité d'autre semblables, ce sont seulement des vérités, et non pas des choses qui soient hors de notre pensée, et il y en a un si grand nombre de telles qu'il seroit malaisé de les dénombrer" (*Prin. Phil.* i. 49). 5. He discovers that they come forth into consciousness; hence he calls them innate ideas, and defines idea: "Cette forme de chacune de nos pensées par la perception immediate de laquelle nous avons connaissance de ces mêmes pensées" (*Rep. aux Deux Object.*). But there is confusion throughout in the view which he takes, and in his mode of expression. 1. He gives no account of the relation between the faculty on the one hand, and the idea or common notion on the other. He does not see that abstraction and generalization are necessary in order to reach the abstract and general idea. 2. The test of self-evidence is not well expressed; in this respect he is inferior to Locke. The clearness and distinctness of an idea is, to say the least of it, a very ambiguous phrase, for in some senses of the word we may have a very clear idea of an imaginary object, or a distinct idea of a falsehood. 3. That there is confusion in this view is evident from the circumstance that he often states that these truths are not equally admitted by all, because they are opposed to the prejudices of some. He speaks of persons "qui ont imprimé de longue main des opinions en leur créance, qui était contraires à quelques-unes de ces vérités" (*Prin.* i. 50). 4. He expects far too much from a bare contemplation of the principles or causes of things: "Mais l'ordre que j'ai tenu en ceci a été tel: premièrement, j'ai tâché de trouver en général les principes ou premières causes de tout ce qui est ou qui peut être dans le monde, sans rien considérer pour cet effet que Dieu seul qui la créé, ni les tirer d'ailleurs que de certaines semences de vérités qui sont naturellement en nos âmes. Après cela, j'ai examiné quels étaient les premiers et les plus ordinaires effets qu'on pouvait déduire de ces causes; et il me semble que par là j'ai trouvé des cieux, des astres, une terre, et même sur la terre de l'eau, de l'air," etc. (*Méth.* Part. VI.)

IX. Locke has, in his account of the Human Understanding, both a sensational, or rather an experiential, element, and a rational element. Eagerly bent on establishing his favorite position that all our ideas are derived from sensation and reflection, he has not blended these elements very successfully, nor been at much pains to show their consistency. In France they took the sensational element and overlooked the other. The Arians and Socinians of Britain seized eagerly on the rational element. In his unmeasured con-

demnation of innate ideas in the First Book of his Essay, he seems to deny truths which he openly defends or incidentally allows in other parts of the work. 1. He gives a high place to reason. Thus, in replying to Stillingfleet, he says: "Reason, as standing for true and clear principles, and also as standing for clear and fair deductions from those principles, I have not wholly omitted, as it is manifest from what I have said of self-evident propositions, intuitive knowledge, and demonstration, in other parts of my Essay." Speaking of self-evident propositions: "Whether they come in view of the mind earlier or later, this is true of them, that they are all known by their native evidence, are wholly independent, receive no light, nor are capable of any proof one from another" (see Rogers' *Essays*, Locke, p. 47). 2. He gives an important place to intuition in Book IV. 3. He fixes on self-evidence as the mark of intuition. "Sometimes the mind perceives the agreement or disagreement of two ideas immediately by themselves, without the intervention of any other, and this I think we may call intuitive knowledge. From this the mind is at no pains of proving or examining, but perceives the truth, as the eye doth light, only by being directed towards it." "This kind of knowledge is the clearest and most certain that human frailty is capable of. This part of knowledge is irresistible, and like bright sunshine, forces itself immediately to be perceived as soon as ever the mind turns its view that way, and leaves no room for hesitation, doubt, or examination, but the mind is presently filled with the clear light of it." "He that demands a greater certainty than this demands he knows not what, and shows only that he has a mind to be a sceptic without being able to be so" (*Essay*, Book IV. Chap. ii. sect. i.; see, also, Book IV. Chap. xvii. sect. iv.). Among truths known intuitively "we have an intuitive knowledge of our own existence" (Book IV. Chap. iii. sect. xxi.); and "man knows by an intuitive certainty that bare nothing can no more produce any real being than it can be equal to two right angles" (Book IV. Chap. x. sect. iii.). 4. He is obliged at times to appeal to necessity of conception. Thus, in arguing with Stillingfleet: "The idea of beginning to be is necessarily connected with the idea of some operation; and the idea of operation with the idea of something operating, which we call a cause." "The idea of a right-angled triangle necessarily carries with it an equality of its angles to two right ones; nor can we conceive this relation, this connection of these two ideas, to be possibly mutable" (*Essay*, Book IV. Chap. iii. sect. xxix.). He speaks of certain and universal

knowledge as having "necessary connection," "necessary coexistence," "necessary dependence" (see Webb on the *Intellectualism of Locke*, p. iii.). 5. He sees that intuitive general maxims are all derived from particulars. This follows from his general maxim that the mind begins with particulars. "The ideas first in the mind, 't is evident, are those of particular things, from which by slow degrees the understanding proceeds to some few general ones" (Book IV. Chap. vii. sect. ix.). "In particulars our knowledge begins, and so spreads itself by degrees to generals" (Book IV. Chap. vii. sect. xi.). Following out this view, he speaks of the general propositions being" not innate, but collected from a preceding acquaintance and reflection on particular instances. These, when observing men have made them, unobserving men when they are proposed to them cannot refuse their assent to" (Book I. Chap. ii. sect. xxi.). 6. He sees clearly — what Kant never saw — that the mind rises to universal propositions by looking at things, and the nature of things. "Had they examined the ways whereby men come to the knowledge of many universal truths, they would have found them to result in the minds of men from the being of things themselves when duly considered, and that they were discovered by the application of those faculties which were fitted by nature to receive and judge of them when duly employed about them" (Book I. Chap. iv. sect. xxv.).

But, on the other hand, Locke has admitted or controverted certain great truths. 1. He imagines that when he has disproved innate ideas in the sense of phantasms and general notions, he has therefore disproved them in every sense. 2. He does not see that the intuition which he acknowledges must have a rule, law, or principle, which may be described as innate, inasmuch as it is in the mind prior to all experience. 3. Misled by his theory of the mind looking at ideas and not at things, he represents intuition as concerned solely with the comparison of ideas. This was noticed by the Bishop of Derry [Dr. King, author of the *Origin of Evil*], in a letter dated Johnstoun, October 26, 1697, to Locke's friend, Mr. Molyneux: "To me it seems that, according to Mr. Locke, I cannot be said to know anything except there be two ideas in my mind, and all the knowledge I have must be concerning the relation these two ideas have to one another, and that I can be certain of nothing else, which in my opinion excludes all certainty of sense and of single ideas, all certainty of consciousness, such as willing, conceiving, believing, knowing, etc., and, as he confesses, all certainty of faith, and, lastly, all certainty of remembrance of which I have

formerly demonstrated as soon as I have forgot or do not actually think of the demonstration" (*Letters between Locke and Molyneux*). Reid refers to Locke's notion that belief or knowledge consists in a perception of the agreement or disagreement of ideas, and characterizes it as "one of the main pillars of modern scepticism." "I say a sensation exists, and I think I understand clearly what I mean. But you want to make the thing clearer, and for that end tell me that there is an agreement between the idea of that sensation and the idea of existence. To speak freely, this conveys to me no light but darkness. I can conceive no otherwise of it than as an odd and obscure circumlocution. I conclude, then, that the belief which accompanies sensation and memory is a simple act of the mind which cannot be defined" (*Collected Writings*, Vol. I. p. 107). 4. He does not see the peculiar nature of intuitive maxims. He perceives that they are got by generalization — the great truth overlooked by the special supporters of innate ideas; but he fails to observe that they are the generalization of primitive cognitions and truths, which carry with them self-evidence and necessity.

X. Leibnitz has profound, but in some respects extravagant, views of necessary truths. 1. He sees that they have a place in the mind, as habitudes, dispositions, aptitudes, faculties. "Les connaissances ou les vérités, en tant qu'elles sont en nous, quand même on n'y pense point, sont des habitudes ou des dispositions" (*Nouv. Essais, Opera*, p. 213 ; ed. Erdmann). At the same place he calls them "aptitudes." "Lorsqu'on dit que les notions innées sont implicitement dans l'esprit, cela doit signifier seulement, qu'il a la faculté de les connaître" (p. 212). 2. "Leibnitz has the honor of first explicitly enouncing the criterion of necessity, and Kant of first fully applying it to the phenomena. In nothing has Kant been more successful than in this under consideration." So says Hamilton (Reid's *Collected Writings*, p. 323). The remark seems correct ; but it should be added that Aristotle, as has been shown, expressly fixed on necessity, while others appealed to it ; even Locke speaks of knowledge as "irresistible," and of "necessary relations." Leibnitz draws more decidedly than had been done before the distinction between necessary and eternal truths and truths of experience (p. 209). 3. Because of the natural faculty and "preformation," the ideas tend to come into consciousness in a special form. "Il y a toujours une disposition particulière à l'action, et à une action plutôt qu'à l'autre" (p. 223). He illustrates this by supposing that in the marble there might be veins which marked

out a particular figure, say that of Hercules, preferably to others. "Mais s'il y avoit des veines dans la pierre, qui marquassent la figure d'Hercule préférablement à d'autres figures, cette pierre y seroit plus determinée, et Hercule y seroit comme inné en quelque façon" (p. 196). 4. He represents the intellect itself as a source of ideas. To the maxim "*Nihil est in intellectu quod non fuerit in sensu*," he adds, "*nisi ipse intellectus.*" The expression is not very explicit. He explains it: "Or l'âme renferme l'être, la substance, l'un, le même, la cause, la perception, le raisonnement, et quantité d'autres notions." But he is surely wrong in identifying these with Locke's ideas of reflection (p. 223). 5. He sees that there is need of more than spontaneity, that there is need of some intellectual process, in order to discover the general truth. "Les maximes innées ne paroissent que par l'attention qu'on leur donne" (p. 213). But: 1. He separates necessary truths from things, and making them altogether mental, he led the way to that subjective tendency which was carried so far by Kant. 2. He does not distinguish between the necessary principle as a disposition unconsciously in the mind and a general maxim discovered by a process. 3. He does not see that the general maxim is reached by generalizing the individual necessary truths.

XI. Lord Shaftesbury protests against Locke's rejection of everything innate and falls back on the word "connatural," derived from Culverwel. "*Innate* is a word he (Locke) poorly plays upon; the right word, though less used, is *connatural*" (*Letters to a Young Gentleman*). He shows that there are many qualities natural to man, and dwells fondly on the sense of beauty and the moral sense. He supplied the Scottish School with the phrase *common sense*, which he represents as being the same with "natural knowledge" and "fundamental reason." "Whatever materials or principles of this kind we may possibly bring with us, whatever good faculties, senses, or anticipating sensations and imaginations may be of nature's growth, and arise properly of themselves without our art, promotion, or assistance, the general *idea* which is formed of all this management, and the clear notion we attain of what is preferable and principal in all these subjects of choice and estimation will not, as I imagine, by any person be mistaken for innate. Use, practice, and culture must precede the understanding and wit of such an advanced size and growth as this" (*Miscellanies*, iii. 2: in *Characteristics*).

XII. Buffier's principal treatise is on *Premières Vérités*. He

sees: 1. That there was in the mind an original law, which he characterizes as a "disposition." 2. He speaks of it as coming forth in common and uniform judgments among all men, or the greater part. 3. He sees that it does not thus come forth till mature age, and till men come to the use of reason. These three points are all brought out in the following sentence: "J'entends ici par le SENS COMMUN, la disposition que la nature a mise dans tous les hommes, ou manifestement dans la plupart d'entre eux, pour leur faire porter, quand ils ont atteint l'usage de la raison, un jugement commun et uniforme sur des objets différents du sentiment intime de leur propre perception: jugement qui n'est point la conséquence d'aucun principe antérieur" (P. i. c. v.). 4. He specifies several important practical characteristics of first truths. "1. Le premier de ces caractères est qu'elles soient si claires, que quand on entreprend de les prouver ou de les attaquer, on ne le puisse faire que par des propositions qui manifestement ne sont ni plus claires ni plus certaines. 2. D'être si universellement reçues parmi les hommes en tout temps, en tous lieux, et par toutes sortes d'esprits, que ceux qui les attaquent se trouvent, dans le genre humain, être manifestement moins d'un contre cent, ou même contre mille. 3. D'être si fortement imprimées dans nous, que nous y conformions notre conduite, malgré les raffinements de ceux qui imaginent des opinions contraires, et qui eux-mêmes agissent conformément, non à leurs opinions imaginées, mais aux premières vérités universellement reçues" (P. i. c. vii.). It does not appear, however, that (1) he fixed explicitly on their deeper qualities of self-evidence and necessity, or (2) showed the relation between their individual and general form.

XIII. FRANCIS HUTCHESON, the founder of the Scottish School, discusses the question whether metaphysical axioms are innate. He denies that they are innate in the sense of their being known or observed from our birth, and maintains that in their general form they are not reached till after many comparisons of singular ideas. He stands up for self-evident axioms, in which the mind perceives at once the agreement and disagreement of subject and predicate, and represents them as being eternal and immutable (see his *Metaphysics*).

XIV. REID'S great merit lies in establishing certain principles of Common Sense, such as those of substance and quality, cause and effect, and moral good, as against the scepticism of Hume. He does not profess to give an exhaustive account of these principles, nor to enter minutely into their distinctive character and mode of opera-

tion, but in conducting his proper work he has mentioned nearly all their distinctive qualities. 1. He represents them as being in the nature of man; thus he speaks of "an original principle of our constitution" (p. 121), and calls them "original and natural judgments," as "part of that furniture which Nature hath given to the human understanding," as "the inspiration of the Almighty" and "a part of our constitution" (p. 209, *Collected Writings:* Hamilton's edition). 2. He represents the mind as having a sense or perception of them; and on the one hand avoids the error of Locke, who regards intuition as concerned solely with a comparison of ideas, and he does not, on the other hand, fall into that of Kant, who looks on them as mere forms in the mind. 3. He follows Locke in fixing on self-evidence as a decisive test. "We ascribe to reason two offices, or two degrees. The first is to judge of things self-evident; the second, to draw conclusions that are not self-evident from those that are. The first of these is the province, and the sole province, of common sense, and therefore it coincides with reason in its whole extent, and is only another name for one branch or one degree of reason" (p. 425; see, also, p. 422). 4. He specifies necessity as a mark. "By the constitution of our nature we are under a necessity of assent to them" (p. 130). He speaks of a certain truth "being a necessary truth, and therefore no object of sense." "It is not that things which begin to exist commonly have a cause, or even that they always in fact have a cause, but that they must have a cause, and cannot begin to exist without a cause" (p. 455; see, also, pp. 456, 521). Yet he has not a steady apprehension of necessity as a test, for he says: "I resolve for my own part always to pay a great regard to the dictates of common sense, and not to depart from them without absolute necessity" (p. 112), as if necessity did not preclude our departing from them. 5. He characterizes them as catholic; thus he appeals to the "universal consent of mankind, not of philosophers only, but of the rude and unlearned vulgar" (p. 456).

His positive errors on this subject are not many, but he has not seen the full truth, and he has fallen into several oversights. 1. By neglecting a rigid use of tests, he has described some truths as first principles into which there enters an experiential element. Thus, for example, "that there is life and intelligence in our fellow-men," "that certain features of the countenance, sounds of the voice, and gestures of the body indicate certain thoughts and dispositions of the mind" (p. 449); that "there is a certain regard due to hu-

man testimony in matters of fact, and even to human authority in matters of opinion" (p. 450); and "that in the phenomena of Nature, what is to be will probably be like to what has been in similar circumstances" (p. 451). A rigid application of the tests of self-evidence and necessity would have shown that these were not first principles. 2. He is not careful to distinguish between the Spontaneous and Reflex use of common sense. He uses legitimately the argument from common sense against Hume, but in philosophy we must use the reflex principle carefully expressed, whereas Reid often appeals in a loose way to the spontaneous conviction. And here I may take the opportunity of stating my conviction (and this notwithstanding Sir W. Hamilton's defence of it in *Note A*) that the phrase "common sense" is an unfortunate, because a loose and ambiguous one. Common sense (besides its use by Aristotle, see Hamilton's *Note A*) has two meanings in ordinary discourse. It may signify, *first*, that unacquired, unbought, untaught sagacity, which certain men have by nature, and which other men never can acquire, even though subjected to the process mentioned by Solomon (Prov. xxvii. 22), and brayed in a mortar. Or it might signify the *communis sensus*, or the perceptions and judgments which are common to all men. It is only in this latter sense that the argument from common sense is a philosophic one; that is, only on the condition that the appeal be to convictions which are in all men; and further, that there has been a systematic exposition of them. Reid did make a most legitimate use of the argument from common sense, appealing to convictions in all men; and bringing out to view, and expressing with greater or less accuracy, the principles involved in these convictions. But then, he has also taken advantage of the first meaning of the phrase; he represents the strength of these original judgments as *good sense* (p. 209); he appeals from philosophy to common sense; and in order to counteract the impression left by the high intellectual abilities of Hume, he shows that those who opposed Hume were not such fools, after all, but have the good sense and shrewdness of mankind on their side (see p. 127, etc., with foot-notes of Hamilton). This has led many to suppose that the argument of Reid and Beattie is altogether an address to the vulgar. In this way, what seemed at the time a very dexterous use of a two-edged sword has turned against those who employed it, and injustice has been done to the Scottish School of philosophers, who do make a proper use of the argument from common sense. 3. He does not see how to reconcile the doctrine

(of Locke) that all maxims appear in consciousness as particulars, with his own doctrine of there being principles in the constitution of the mind, and thence coming forth in general propositions.

XV. KANT has, next to Locke, exercised the greatest influence on modern speculation. As a general rule, the one dwells upon and magnifies the truths which the other overlooks. Kant is a reaction against Locke. He carries out, in his own logical way, certain principles which had grown up in the schools of Descartes, Leibnitz, and Wolf. 1. He sees more clearly, and explains more fully than ever had been done before, that the a priori principles are in the mind in the character of forms, or rules, prior to their being called forth or exercised. Thus, speaking of our intuition of space, he says it must be already a priori in the mind; that is, before any perception of objects. "Die Form derselben muss zu ihnen insgesammt im Gemüthe a priori bereit liegen und daher abgesondert von aller Empfindung können betrachtet werden' (*Werke*, Bd. ii. p. 32; ed. Rosenkranz). The mind has not only Intuitions of Space and Time to impose on phenomena or presentations, it has categories of Quantity, Quality, Relation, Modality, to impose on its cognitions; and Ideas of Substance, Totality of Phenomena, and Deity, to impose on the judgments reached by the categories. 2. He maintains that the forms of the sensibility and the categories of the understanding have all a reference to objects of experience, real or possible; this, in fact, is their use — without this they would be meaningless. The ideas of pure reason do, however, refer to the comparisons of the understanding, and not to objects, and fruitless speculation arises from supposing that they refer to objects; and there may also be an undue use of the forms of sense and the categories of the understanding, but in themselves they refer to objects of possible experience (*Kritik d. r. V.* Trans. Dial.). 3. He proposes in his great work, the *Kritik of Pure Reason*, to give an inventory, in systematic order, of the a priori principles in the mind: "Denn es ist nichts als das Inventarium aller unserer Besitze durch reine Vernunft, systematisch geordnet" (Vorrede zu erst. Auf.). He seeks for an organon, which would be a compendium of the principles according to which a priori cognitions would be obtained: "Ein Organon der reinen Vernunft würde ein Inbegriff derjenigen Principien seyn, nach denen alle reine Erkentnisse a priori können erworben und wirklich zu Stande gebracht werden" (Einleit.). 4. He uses systematically the test of Necessity and Universality, meaning by Universality the Universality of the Truth.

But, on the other hand, he has fallen into the grossest misapprehensions regarding the nature of the a priori principles of reason. 1. He maintains that the mind can have no intuition of things. All that it can know are mere presentations or phenomena. It is all true that the Forms of Sense and the Categories relate to objects of possible experience, but then, experience does not give us a knowledge of things. "Es sind demnach die Gegenstände der Erfahrung niemals an sich selbst." Speaking even of self-consciousness, he says, it does not know self as it exists: "Und Selbst ist die innere und sinnliche Anschauung unseres Gemüths (als Gegenstandes des Bewusstseyns) . . . auch nicht das eigentliche Selbst, so wie es an sich existirt" (Bd. ii. p. 389). He thus separates the intuitions of the mind altogether from things. 2. He makes our a priori Intuitions impose on phenomena the forms of Space and Time, which have no existence out of the mind. The categories are frameworks for binding conceptions into judgments. The ideas of pure reason reduce the judgments to unity, but have no reference to objects; and if we suppose them to have, we are landed in illusion and contradictions. By this system he makes much ideal which we are naturally led to regard as real, and thus prepared the way for Fichte, who made the whole ideal. 3. His method of discovering the a priori principles of the mind is not the Inductive, but the Critical. Reason is called to undertake the task of self-examination, which may secure its righteous claims, not in an arbitrary way, but according to its own eternal and unchangeable laws. "Eine Aufforderung an die Vernunft, das beschwerlichste aller ihrer Geschäfte, nämlich das der Selbsterkenntniss aufs Neue zu übernehmen und einen Gerichtshof einzusetzen, der sie bei ihren gerechten Ansprüchen sichere, dagegen aber alle grundlose Anmaassungen nicht durch Machtsprüche sondern nach ihren ewigen und unwandelbaren Gesetzen" (Vor. zu erst. Auf.). Reason was thus set on criticising itself according to laws of its own, and a succession of speculators set out each with what he alleged to be the laws of reason, but no two of them agreed as to what the laws of reason are, or what the standard by which to test them, and conclusions were reached which were evidently most irrational.

XVI. Dugald Stewart delighted to look on our intuitions under the aspect of "Fundamental Laws of Human Belief" (*Elem.* Vol. II. Chap. i.). 1. He sees that they are of the nature of laws in the mind. 2. He sees that they are natural, original, and fundamental. 3. He sees that they are involved in the faculties. Hence

he calls them "elements of reason" (*Elem.* Vol. II. p. 49; Ham. edit.); he would identify them with the exercise of our reasoning powers, and speaks of them as "component elements," without which the faculty of reasoning is inconceivable and impossible (p. 39). It may be added that while he never formally appeals to necessity, he is obliged to use it incidentally. Thus "every man is impressed with an irresistible conviction that all his sensations, thoughts, and volitions belong to one and the same being" (*Elem.* Vol. I. p. 47); and "we are impressed with an irresistible conviction of our personal identity" (*Essays*, p. 59). Speaking of causes, in the metaphysical meaning of the word, he says, the "word *cause* expresses something which is supposed to be necessarily connected with the change" (*Elem.* Vol. I. p. 97). In looking on them as "fundamental laws," and in avoiding the ambiguity of the phrase "common sense," he has gone beyond Reid, but otherwise he has not thrown much light on them. He is in great confusion from not discovering how it is that "the elements of reason" may become general maxims, axioms, or principles; and his whole view of mathematical axioms is erroneous (see *Elem.* Vol. II.).

XVII. Dr. Thomas Brown has demonstrated, with great ingenuity, that our belief in the invariableness of cause and effect cannot be had from experience (*Cause and Effect*, Part III. sect. iii.). He has also shown that the belief in our personal identity is intuitive (*Lect.* 13). When he comes to our intuitions, he speaks of them as "principles of thought;" as "primary universal intuitions of direct belief;" as "being felt intuitively, universally, immediately, irresistibly;" as "an internal, never-ceasing voice from the Creator and Preserver of our being;" as "omnipotent, like their Author;" and "such that it is impossible for us to doubt them" (*Lect.* 13). These are fine expressions, but his view of them is meagre, after all, and a retrogression from the Scottish School. He makes no inquiry into their nature, laws, or tests.

XVIII. Sir William Hamilton's *Note A*, appended to his edition of Reid's *Collected Writings*, is the most important contribution made in this century to the science of first truths. 1. He has there specified nearly every important character of our intuitive convictions, and attached to them an appropriate nomenclature. 2. He has shown that the argument from common sense is one strictly scientific and eminently philosophic. 3. He has with unsurpassed erudition brought testimonials in behalf of the principles of common sense from the writings of the eminent thinkers of all ages and countries.

But on the other hand: 1. He fails to draw the distinction between common sense as an aggregate of laws in the mind, as convictions in consciousness, and as generalized maxims. Thus the confusion of the spontaneous cognition and its generalized form appears in such passages as the following: "The primitive cognitions seem to leap ready from the womb of reason, like Pallas from the head of Jupiter; sometimes the mind places them at the commencement of its operations, in order to have a point of support and a fixed basis, without which the operations would be impossible; sometimes they form in a certain sort the crowning, the consummation, of all the intellectual operations" (*Metaphysics, Lect.* 38). 2. He does not properly appreciate the circumstance that intuitive convictions all look to singulars, and that there is need of induction to reach the general truth. He supposes that the general truth is revealed at once to consciousness. "Philosophy is the development and application of the constitutive and normal truths which consciousness immediately reveals." "Philosophy is thus wholly dependent on consciousness" (Reid's *Collected Writings*, p. 746). It is true that philosophy is dependent on consciousness, but it is dependent also on abstraction and generalization. He calls ultimate, primary, and universal principles facts of consciousness (*Met. Lect.* 15). 3. His method is not the Inductive, but that of Critical Analysis introduced by Kant (*Met. Lect.* 29). He fails to observe that the mind in intuition looks at objects. He makes the mind's conviction in regard to such objects as space, substance, cause, and infinity to be impotencies, and their laws to be laws of thought, and not of things (Append. to *Discuss. on Phil.*). The error of such views will come out as we advance.

XIX. M. Cousin has given, throughout all his philosophical works, clear and beautiful expositions of the elements of reason. 1. It is a favorite doctrine that reason looks at truths, eternal, universal, and absolute; truths, not to the individual or the race, but to all intelligences. 2. He uses, most successfully, the tests of necessity and universality, in order to distinguish the truths of reason from other truths. 3. He has distinguished between the spontaneous and reflective form of the truths of reason (see *ante*, p. 19). 4. He has shown that primitive truths are all at first individual. "C'est un fait qu'il ne faut pas oublier, et qu'on oublie beaucoup trop souvent, que nos jugements sont d'abord des jugements particuliers et déterminés, et que c'est sous cette forme d'un jugement particulier et déterminé que font leur première apparition toutes

les vérités universelles et nécessaires" (*Sér.* ii. t. iii. leç. 1 ; see also *Sér.* i. t. i. progr. ; t. ii. progr. leç. ii.-iv. xi.). But on the other hand, he has given an exaggerated account of the power of human reason, and has not seen that induction is required in order to the discovery of necessary truth in its general form. 1. He uses unhappy and unguarded language in speaking of reason. His favorite epithet as applied to it is "impersonal;" language which has a correct meaning inasmuch as the truth is not to the person, but to all intelligences, but is often so employed as, without his intending it, to come very close to those pantheistic systems which identify the Divine and human reason (see *Sér.* ii. leç. v.). 2. His reduction of the ideas of reason to three is full of confusion. The first idea is supposed to be unity, substance, cause, perfect, infinite, eternal; the second, multiple, quality, effect, imperfect, finite, bounded; and the third, the relation of the other two. It is to confound the things which manifestly differ, to make unity, cause, good, infinite, to be identical. The business of the metaphysician should be to observe each of these carefully, and bring out their peculiarities and their differences. 3. He does not see how it is that the general maxim is formed out of the particulars. He says that abstraction "saisit immédiatement ce que le premier objet soumis à son observation renferme de général (*Sér.* i. t. i. leç. xi.). He does not see that in order to the formation of the general law there is need of a process, often delicate and laborious, of observation, abstraction, and generalization.

XX. Dr. Whewell has done great service at once to the physical sciences and to metaphysics, by showing, in his *History of Inductive Sciences:* 1. That the former proceed upon and imply principles not got from experience; that geometry and arithmetic depend on first truths regarding space, time, and number; and mechanical science on intuitions regarding force, matter, etc. 2. He has exhibited these principles in instructive forms, announcing them in their deeper and wider character under the designation of "fundamental ideas," and then presenting them under the name of "conceptions" in the more specific shapes in which they become available in the particular sciences: thus, in mechanical science the fundamental idea of cause becomes the conception of force. But then he has injured his work: 1. By following the Kantian doctrine of forms, and supposing that the mental ideas "impose" and "superinduce" on the objects something not in the objects, whereas they merely enable us to discover what is in the objects. 2. He

also fails to show that the ideas or maxims in the general form in which alone they are available in science are got by induction. 3. The phraseology which he employs is unfortunate; it is "fundamental ideas" and "conceptions." The word "idea" has been used in so many different senses by different writers, by Plato, Descartes, Locke, Kant, and Hegel, that it is perhaps expedient to abandon it altogether in strict philosophic writing; it is certainly not expedient to use it, as Whewell does, in a new application. The word "conception" stands in classical English both for the phantasm, or image, and the logical notion; certain later metaphysicians would restrict it to the logical notion; and there is no propriety in using it to signify an a priori law. 4. He has damaged the general acceptance of his principles, which seem to me to be as true as they are often profound, by making a number of truths a priori which are evidently got from experience: thus he makes the law of action and re-action, and the laws of motion generally, self-evident and necessary.

XXI. J. S. Mill. I have shown in *Examination of Mr. J. S. Mill's Philosophy* that while denying intuitive principles he is obliged constantly to assume them.

XXII. Lotze. He opens his work on Metaphysics by telling us that "Reality including Change is the subject of Metaphysic." In his dictations as reported by Professor Ladd he says that Metaphysic is the science of that which is actual, not of that which is merely thinkable." "The problem of Metaphysic is actually this: to discover the laws of the connection which unites the particular (simultaneous or successive) elements of actuality." It is pleasant to find a German philosopher thus turning to actuality which Kant had placed at such a distance. But he has stopped half-way, and has thus been able to do little for a Realistic Philosophy. He tells us that "the belief of ordinary intuition that it has an immediate perception of the nature of things can be only short-lived." By help of certain obvious distinctions I have been showing that this is the philosophy sure to be long-lived. He says, "To be" means "to stand in relation," as if things did not require *to be* in order to stand in relation. He makes Space and Time to have only a subjective existence, whereas realism requires us to hold that the extension of that wall and the time of sunrise have quite as objective a reality as the wall and the event.

XXIII. Herbert Spencer enunciates a fundamental principle. "The inconceivableness of its negation is that which shows a cogni-

tion to possess the highest rank — is the criterion by which its unsurpassable validity is known." "If its negation is inconceivable, the discovery of this is the discovery that we are obliged to accept it. And a cognition which we are thus obliged to accept is one which we class as having the highest possible certainty" (*Psychology*, Vol. II. p. 407). This is a very mutilated and partial version of the test of necessity. Mr. Spencer holds that all our cognitions and judgments are determined by our nervous structure, which has been fashioned by heredity. In this evolution man has no more freedom of will than the spoke has in the revolution of a wheel. We can conceive only what we are compelled to do by our inherited nervous frame, and we cannot conceive, certainly cannot believe, otherwise. Liberty of choice would be an evil in our world, as it might interfere with the evolution of nature. This cognition which we are obliged to accept is not a cognition of things, as is maintained in this work, but is a necessity imposed on us by our descent. To us it is "the highest possible certainty, and unsurpassable," but it is not pretended that it is a certainty in the nature of things. In other worlds, with a different evolutionary process, it might not be certainty, but uncertainty and error. We who feel as if we were free feel oppressed under this load.

PART SECOND.

PARTICULAR EXAMINATION OF PRIMITIVE TRUTHS.

BOOK I.

PRIMITIVE COGNITIONS.

CHAPTER I.

THE MIND BEGINS ITS INTELLIGENT ACTS WITH KNOWLEDGE.

It is impossible to determine directly and certainly what are the first exercises of the soul, as the memory of the infant does not go so far back. It is supposed by many that it begins with some sort of sensations or feelings. This may or may not be. But it should be carefully noted that these are not acts of intelligence, and that we cannot argue from them the existence of things without having more in the conclusion than we have in the premises.

I think it can be shown that the mind must begin its intelligent acts with knowledge, which means that we know things. It is upon the things thus known that our thinking powers proceed.

This is not the account usually given. From an early date the common opinion in philosophy was that the mind does not look at things, but on some idea, image, or representation of things. This view, with no pretensions to precision in the statement of it, was a prevalent one

in ancient Greece, in the scholastic ages, and in the earlier stages of modern philosophy. It seems to me to be the view which was habitually entertained by Descartes and Locke. In later times, the mind was supposed to commence with "impressions" of some kind. This view may be regarded as introduced formally into philosophy by Hume, who opens his *Treatise of Human Nature* by declaring that all the perceptions of the mind are impressions and ideas; that impressions come first, and that ideas are the faint images of them. This view has evidently a materialistic tendency. Literally, an impression can be produced only on a material substance, and it is not easy to determine precisely what is meant by the phrase when it is applied to a state of the conscious mind. This impression theory is the one adopted by the French Sensational School and by the physiologists of this country. In Germany the influence exercised by Kant's *Kritik of Pure Reason* has made the general account to be that the mind starts with presentations, and not with things, with phenomena in the sense of appearances, which "phenomena" are but modifications of Hume's "impressions" and of the "ideas" of the ancients. Now it appears to me that all these accounts, consciousness being witness, are imperfect, and by their defects erroneous. The mind is not conscious of these impressions preceding the knowledge which it has immediately of self, and the objects falling under the notice of the senses. Nor can it be legitimately shown how the mind can ever rise from ideas, impressions, phenomena, to the knowledge of things. The followers of Locke have always felt the difficulty of showing how the mind from mere ideas could reach external realities. Hume designedly represented the original exercises of the mind as being mere impressions, in order to under-

mine the very foundations of knowledge. Though Kant acknowledged a reality beneath the presentations, beyond the phenomena, those who followed out his views found the reality disappearing more and more, till at length it vanished altogether, leaving only a concatenated series of mental forms.

There is no effectual or consistent way of avoiding these consequences but by falling back on the natural system, and maintaining that the mind in its intelligent acts starts with knowledge. But let not the statement be misunderstood. I do not mean that the mind commences with abstract knowledge, or general knowledge, or indeed with systematized knowledge of any description. It acquires first a knowledge of individual things, as they are presented to it and to its knowing faculties, and it is out of this that all its arranged knowledge is formed by a subsequent exercise of the understanding. From the concrete the mind fashions the abstract, by separating in thought a part from the whole, a quality from the object. Starting with the particular, the mind reaches the general by observing the points of agreement. From premises involving knowledge, it can arrive at other propositions also containing knowledge. It seems clear to me that if the mind had not knowledge in the foundation, it never could have knowledge in the superstructure reared; but finding knowledge in its first intelligent exercises, it can thence, by the processes of abstraction, generalization, and reasoning, reach further and higher knowledge.

The mind is endowed with at least two simple cognitive powers, — sense-perception and self-consciousness. Both are cognitive in their nature, and look on and reveal to us existing things: the one, material objects presented to us in our bodily frame and beyond it; and

the other, self in a particular state or exercise. It is altogether inadequate language to represent these faculties as giving us an idea, or an impression, or an apprehension, or a notion, or a conception, or a belief, or looking to unknown appearances: they give us knowledge of objects under aspects presented to us. No other language is equal to express the full mental action of which we are conscious.

If this view be correct, the unit of thought is not, as is commonly represented, judgment, but cognition of things, on which judgments may be formed.

CHAPTER II.

OUR INTUITION OF BODY BY THE SENSES.

I.

We are following the plainest dictates of consciousness, we avoid a thousand difficulties, and we get a solid ground on which to rest and to build, when we maintain that the mind in its first exercises acquires knowledge; not, indeed, scientific or arranged, not of qualities of objects and classes of objects, but still knowledge, — the knowledge of things presenting themselves, and as they present themselves; which knowledge, individual and concrete, is the foundation of all other knowledge, abstract, general, and deductive. In particular, the mind is so constituted as to attain a knowledge of body or of material objects. It may be difficult to ascertain the exact point or surface at which the mind and body come together and influence each other, in particular, how far into the body (Descartes without proof thought to be in the pineal gland), but it is certain that when they do meet mind knows body as having its essential properties of extension and resisting energy. It is through the bodily organism that the intelligence of man attains its knowledge of all material objects beyond. This is true of the infant mind; it is true also of the mature mind. We may assert something more than this regarding the organism. It is not only the medium through which we know all bodily objects beyond itself; it is itself an object primarily known; nay, I am inclined to think that, along with the objects immediately

affecting it, it is the only object originally known. Intuitively, man seems to know nothing beyond his own organism, and objects directly affecting it; in all further knowledge there is a process of inference proceeding on a gathered experience. This theory seems to me to explain all the facts, and it delivers us from many perplexities.

Let us go over the senses one by one, with a view of determining what seems to be the original information supplied by each. In the sense of smell, the objects immediately perceived are the nostrils as affected; it is only by experience that we know that there is an object beyond, from which the smell proceeds, and it is only by science that we know that odorous particles have proceeded from that object. In hearing, our primary perceptions seem to be of the ear as affected; that there is a sounding body we learn by further observation, and that there are vibrations between it and the ear we are told by scientific research. In taste, it is originally the palate as affected by what we feel by another sense to be a tangible body, which body science tells us must be in a liquid state. In touch proper, there is a sensation of a particular part of the frame as affected by we know not what, but which we may discover by experiential observation. It is the same with all the impressions we have by the sense of temperature, the sense of titillation, the sense of shuddering, the sense of flesh-creeping, the sense of lightness or of weight, and the like organic affections, usually, but improperly, attributed to touch. In regard to all these senses, it seems highly probable that our original and primitive perceptions are simply of the organism as affected by something unknown — so far as intuition is concerned. But there are other two senses which furnish, I am inclined to

think, a new and further kind of information. The sense of touch, when the phrase is used in a loose sense, is a complex one, embracing a considerable number and variety of senses, which have not been scientifically classified, and which, perhaps, cannot be so till we have a more thorough physiology of the nerves. Certain it is that there is a locomotive energy and a muscular sense entirely different from feeling, or such affections as those of heat and cold. The soul of man instinctively wills to move the arm; an action is produced in a motor nerve, which sets in motion a muscle, with probably an attached set of bones, and the intimation of such a movement having taken place is conveyed to the brain by a sensor nerve. As the result of this complex physiological process, we come to know that there is something beyond our organism; we know an object out of our organism hindering the movement of the organ and resisting our energy (*a*). It is more difficult to determine what is the original perception by sight. It must certainly be of a colored surface affecting the felt organism. In the famous case operated on by Cheselden, a boy born blind had his eyes couched, and "when he first saw, he was so far from making any judgment about distances that he thought all objects whatever touched his eyes (as he expressed it), as what he felt did his skin." In the Franz case, the object seemed, when the boy's eyes were opened, very near; and in the Trinchinetti cases, the girl tried to grasp an orange with her hand very near the eye; then, perceiving her error, stretched out her forefinger, and pushed it in a straight line slowly until she reached her object (*b*).

I think it probable that the colored surface perceived as affecting the living organism is seen as in the direction of the felt and localized sentient organ, neither behind it

nor at the side, but at what distance we know not till other senses and a gathered experience come to our aid. Such seems to be our original knowledge, received through the various senses as inlets.

But we are not to understand that the mind receives sensations and information only from one sense at a time. In order to have a full view of the actual state of things, we must remember that man, at every instant of his waking existence, is getting organic feelings and perceptions from a number of sensitive sources; possibly at one and the same time from the sense of heat, from the sense of taste in the mouth, from the sense of hearing, from the sense of sight, — say of a portion of our own body and of the walls of the apartment in which we sit, — and from the muscular sense, — say of the chair on which we sit, or the floor on which we stand. Our whole conscious state at any given time is thus a very complex, or rather a concrete one. There is in it at all times a sense of the living body as extended, and, I may add, as ours. This is a sense which human beings, infant and mature, carry with them every instant of their waking existence, perhaps in a low state even in their times of sleep. "This consciousness of our own corporeal existence is the standard by which we estimate in our sense of touch the extension of all resisting bodies."[1] Along with this there will always be in our waking moments a sense of something extra-organic but affecting the organism, such as the surface before the eye, or the object which supports us. But the vividness of the impression made, or some decisive act of the will in order to accomplish a desired end, will at times centre the mind's regards in a special manner on some one of the objects made known by the

[1] Müller's *Physiology*, p. 1081.

senses. Thus, a violent pain will absorb the whole mental energy on the organ affected; or a vivid hue will draw out the mind towards the color; or in order to some purpose we may fix our regards on the shape of the object. By these concentrations of intelligence we obtain a more special acquaintance with the nature of the objects presenting themselves. It is thus only that the special senses fulfil their full function, and impart information abiding with us beyond the moment when the primary affection is produced.

Such, approximately and provisionally, seems to be our original stock of knowledge acquired by sense. It is as yet within very narrow limits, within our frames, and a sphere immediately in contact with them. "We perceive," says Hamilton, "and can perceive nothing but what is relative to the organ." We reach a more extended knowledge by remembering what we have thus obtained, by subjecting it to processes of abstraction and generalization, and drawing inferences from it. Our information is especially enlarged and consolidated by combining the information got from several of the senses, which are all intended to assist each other. In particular, the two intellectual senses *par excellence*, sight and the muscular sense, are fitted to aid each other and all the other senses. By sight we know merely the object as having a colored surface; by the muscular sense we may come to know that this object with a superficies has three dimensions and is impenetrable; we may know the object to be the same by our seeing upon it the hand which feels the pressure (*c*). By sight we know not how far the colored surface is from our organism; by inferences founded on gathered information from the muscular sense we come to know how far it is from us, whether an inch or many feet or yards. By the muscu-

lar sense we know solid objects only as pressing themselves immediately on our organism; by sight we see objects — which sight does not declare to be solid, but which a combined experience declares must be solid — thousands or millions of miles away. By inferences from various senses united we know that this taste is from a certain kind of food, that this smell is from a rose or lily, that this sound is from a human voice or a musical instrument. Thus our knowledge, commencing with the organism and objects affecting it, may extend to objects at a great distance, and clothe them with qualities which are not perceived as immediately belonging to them. We know that this blue surface, seen indistinctly, is a bay of the ocean fifty miles off, and that this brilliant spark up in the blue concave is a solid body, radiating light hundreds of millions of miles away.

Let us analyze what is involved in this intuitive knowledge.

II.

We know the Object as Existing or having Being. This is a necessary conviction, attached to, or rather composing an essential part of, our concrete cognition of every material object presented to us, be it of our own frame or of things external to our frame; whether this hard stone, or this yielding water, or even this vapory mist or fleeting cloud. We look on each of the objects thus presented to us, in our organism or beyond it, as having an existence, a being, a reality. Every one understands these phrases; they cannot be made simpler or more intelligible by an explanation. We understand them because they express a mental fact which every one has experienced. We may talk of what we contemplate in sense-perception being nothing but an impression, an appearance, an idea, but we can never be made

to give our spontaneous assent to any such statements. However ingenious the arguments which may be adduced in favor of the objects of our sense-perceptions being mere illusions, we find, after listening to them, and allowing to them all the weight that is possible, that we still look upon bodies as realities the next time they present themselves. The reason is, we know them to be realities, by a native cognition which can never be overcome.

III.

In our primitive cognitions, we know objects as having an Existence Independent of the Contemplative Mind. We know the object as separate from ourselves. We do not create it when we perceive it, nor does it cease to exist because we have ceased to contemplate it. Our intuition indeed does not say, as to this being, how or when it came to be there, nor whether nor in what circumstances it may cease; for information on such topics we must go to other quarters. But when the question is started, we must decide that this thing had a being prior to our perceiving it,— unless indeed it so happened that it was produced by a power capable of doing so at the very time our senses alighted on it; and that it will continue to exist after we have ceased to regard it,— unless indeed something interpose to destroy it. All this is involved in our very cognition of the object, and he who would deny this is setting aside our very primitive knowledge, and he who would argue against this will never be able to convince us in fact, because he is opposing a fundamental conviction which will work whenever the object is presented (*d*).

IV.

In our primitive cognition of body there is involved a knowledge of Outness or Externality. We know the ob-

ject perceived, be it the organism or the object affecting the organism, as not in the mind, but as out of the mind. In regard to some of the objects perceived by us, we may be in doubt as to whether they are in the organism or beyond it, but we are always sure that they are extra-mental. This is a conviction from which we can never be driven by any power of will or force of circumstances. It is at the foundation of the judgments to be afterwards specified as to the distinctions between the self and the not-self, the *ego* and *non-ego* (*e*).

V.

We know the object as Extended. I am inclined to think that this knowledge in the concrete is involved even in such perceptions as those of smell, taste, hearing, and feeling, and the allied affections of temperature and titillation. In all these we intuitively know the organism as out of the mind, as extended, and as localized. At every waking moment we have sensations from more than one sense, and we must know the organs affected as out of each other and in different places (*f*). It is acknowledged that the primitive knowledge got in this way is very bare and limited, and without those perceived relationships and distinctions which become associated with it in our future life. But imperfect though it be, it must ever involve the occupation of space. The other two senses furnish more express information, the eye giving a colored surface of a defined form, and the muscular sense extension in three dimensions. It should be noticed that in our knowledge of extra-organic objects, whether by the eye or the muscular sense, we know them as situated in a certain place in reference to our organism, which we have already so far localized and distributed in space, and which henceforth we use as a centre for direction and distance.

VI.

We know the Objects as Affecting Us. I have already said that we know them as independent of us. This is an important truth. But it is equally true and equally important that these objects are made known to us as somehow having an influence on us. The organic object is capable of affecting our minds, and the extra-organic object affects the organism which affects the mind. Upon this cognition are founded certain judgments as to the relations of the objects known to the knowing mind. In particular,

VII.

In certain, if not in all, of our original cognitions through the senses we know the objects as exercising Potency or Property. This is denied in theory by many who are yet found to admit it inadvertently when they tell us that we can know matter only by its properties: for what, I ask, are properties but powers to act in a certain way? But still it is dogmatically asserted that whatever we may know about material objects, we can never know that they have power; we cannot see power, they say, nor hear power, nor touch power. In opposition to these confident assertions, I lay down the very opposite dogma, that we cannot see body, or touch, or even hear, or taste, or smell body, except as affecting us; that is, having a power in reference to us. When an extra-organic body resists our muscular energy (g), what is it doing but affecting our organism in a certain way? The very colored surface revealed through sight is known to us as affecting, that is, having an influence over, our organism. But there is more than this, — the organism is known as having power to affect the cogni-

tive self. The muscular effort resisted, the visual organs impressed by the colored surface, are known as producing an effect on the mind. The organs affected in smell, in taste, in temperature, in hearing, in feeling, are all known as rousing the mind into cognitive activity. It might be further maintained, even in regard to those senses which do not immediately reveal anything extra-organic, that they seem to point to some unknown cause of the affection known; but it is better to postpone the treatment of this question till it can be fully discussed. But in regard to the two senses which reveal objects beyond the bodily frame, and in regard to all the senses as far as they make known our frame to us, it seems clear to me that there is an intuitive conviction of potency wrapped up in all our cognitions (*g*).

VIII.

But it will be vehemently urged that it is most preposterous to assert that we know all this by the senses. Upon this I remark that the phrase *by the senses* is ambiguous. If by senses be meant the mere bodily organism, — the eye, the ears, the nerves, and the brain, — I affirm that we know, and can know, nothing by this bodily part, which is a mere organ or instrument; that so far from knowing potency or extension, we do not know even color, or taste, or smell. But if by the senses be meant the mind exercised in sense-perception, summoned into activity by the organism, and contemplating cognitively the external world, then I maintain that we do know, and this intuitively, external objects as influencing us; that is, exercising powers in reference to us. I ask those who would doubt of this doctrine of what it is that they suppose the mind to be cognizant in sense-perception. If they say a mere sensation or im-

pression in the mind, I reply that this is not consistent with the revelation of consciousness, which announces plainly that what we know is something extra-mental. If they say, with Kant, a mere phenomenon in the sense of appearance, then I reply that this too is inconsistent with consciousness, which declares that we know the thing. But if we know the thing, we must know something about it. If they say we know it as having extension and form, I grasp at the admission, and ask them to consider how high the knowledge thus allowed, involving at one and the same time space, and an object occupying space, and so much of space. Surely those who acknowledge this much may be prepared to confess further that the mind which in perception is capable of knowing an object as occupying space, is also capable of knowing the same object as exercising power in regard to us. We have only to examine the state of mind involved in all our cognitions of matter to discover that there is involved in it a knowledge both of extension and power.

(*a*) The following is the account given by Müller (*Physiology*, trans. by Baly, p. 1080): "First, the child governs the movement of its limbs, and thus perceives that they are instruments subject to the use and government of its internal 'self,' while the resistance which it meets with around is not subject to its will, and therefore gives it the idea of an absolute exterior. Secondly, the child will perceive a difference in the sensations produced according as two parts of its own body touch each other, or as one part of its body only meets with resistance from without. In the first instance, where one arm, for example, touches the other, the resistance is offered by a part of the child's own body, and the limb thus giving the resistance becomes the subject of sensation as well as the other. The two limbs are in this case external objects of perception, and percipient at the same time. In the second instance, the resisting body will be represented to the mind as something external and foreign to the living body, and not subject to the internal 'self.' Thus will arise in the mind of the child the idea of a resistance which one part of its own body can offer to other parts of its body,

and at the same time the idea of a resistance offered to its body by an absolute 'exterior.' In this way is gained the idea of an external world as the cause of sensations."

(*b*) The Cheselden case is reported in *Phil. Trans.* 1728. I have noticed other cases in my *Psychology*, *The Cognitive Powers*, B. I. C. i. 11. Berkeley, Stewart, and Brown hold that color without extension is the proper object of sight. Hamilton (*Metaphysics*, Lect. 27) seems to me to demonstrate that a perception of colors, and consequently of the difference of colors, necessarily involves the perception of a discriminating line, and that a line and figure are modifications of extension, so that "a perception of extension is necessarily given in the perception of colors."

(*c*) If the eye gives lines and figures, it must in a sense give the distance (of course not the measured distance) of one point or edge of a figure from another. This is a necessary modification of the Berkeleyan theory of vision. What the persons whose eyes were couched felt as touching their eyes must have been felt as a surface like their skin. Though they had no intuitive means of determining the distance of the seen surface from their felt and localized organism, yet it should be observed, they have extension in the original ocular perception, and a preparation for measuring the distance of the seen surface with the aid of the muscular sense, more particularly as the hand moves over the seen object or moves from one seen object to another. In reference to a cognate question, there can be no doubt, I think, that persons with a newly imparted power of vision would by binocular vision see a solid as different from a surface, but it does not follow that they would know it to be a solid.

(*d*) The convictions referred to in these paragraphs set aside at once the doctrine of Kant, that the mind, in the intuition of sense, takes cognizance of phenomena in the sense of appearances. They should also modify the doctrine of Hamilton. "Our knowledge of qualities or phenomena is necessarily relative, for these exist only as they exist in relation to our faculties" (foot-note to Reid, p. 323). It is a truism that we can know objects merely as our faculties enable us to know them; but the question is, What is the nature and extent of the knowledge which our faculties furnish? I admit that whatever external objects we know, we know in a relation to us. But I hold that man and his faculties are so constituted as to know things (with being) exercising qualities, and to know qualities as existing separate from and independent of our cognition of them by our faculties.

(*e*) The convictions spoken of in these paragraphs set aside all

forms of idealism in sense-perception. Berkeley says that "of unthinking things without us their *esse* is *percipi*, nor is it possible they should have any existence out of the minds of thinking things which perceive them." "When we do our utmost to conceive the existence of external bodies, we are all the while only contemplating our own ideas" (*Principles of Human Knowledge*, ii. xxiv.). I hold, that according to our intuitive conviction, the thing which we perceive must exist before we can perceive it, and that we perceive it as an extended thing independent and out of the contemplative mind. Fichte represents the external thing as a creation or projection of the perceiving mind. But the mind, in knowing the self as perceiving, knows that it is an external thing that is perceived, and cannot be made to think otherwise. Professor Ferrier bases his fabric of demonstrated idealism on the proposition, the object of knowledge "always is, and must be, the object with the addition of one's self, — object *plus* subject, — thing, or thought, *mecum*" (*Inst. of Metaph.* Prop. ii.). If this proposition professes to be a statement of fact, I deny that the fact of consciousness is properly stated. If it professes to be a first truth, I deny that it ought to be assumed in this particular form. No doubt we always know self at the same time that we know an external object by sense-perception, but we know the external object as separate from and independent of self. We might as well deny that we know the object at all as deny that we know it to have an existence distinct from self.

(*f*) Hamilton says, "An extension is apprehended in the apprehension of the reciprocal externality of all sensations" (Appendix to Reid, p. 885). Again, "In the consciousness of sensations relatively localized and reciprocally external, we have a veritable apprehension and consequently an immediate perception of the affected organism, as extended, divided, figured," etc. (*Ibid.* p. 884). Em. Saisset, in the article *Sens*, in *Dict. des Sciences Philosophiques*, dwells on the localization of our sensations in their various organic seats.

(*g*) Locke says that impenetrability, or, as he prefers calling it, as having less of a negative meaning, solidity, seems the "idea most intimately connected with and essential to body, so as nowhere else to be found or imagined, but only in matter;" and he adds, we "find it inseparably inherent in body wherever or however modified;" and in explaining this, he says of bodies that "they do by an insurmountable force hinder the approach of the parts of our hands that press them" (*Essay*, II. IV. 1). Herbert Spencer has done great service to philosophy by showing that force is implied in all knowledge by the senses.

CHAPTER III.

DISTINCTIONS TO BE ATTENDED TO IN OUR COGNITION OF BODY.

It is maintained in this work that all we know by the senses is real. But we must be careful to determine what we do thus know. In order to defend the doctrine of Realism we must draw several important distinctions.

I.

The difference between Extra Mental and Extra Organic perception. All objects perceived are beyond the mind, but all are not beyond the body. Probably our first perceptions, mingled with sensations, are of our bodily frame; for anything we know, there may be tactile perceptions by the infant in the womb. It is certain that in our mature life we have organic affections, such as those of the alimentary canal and stomach, which exercise no action without the body. We must take care not to give the organic affections an extra organic validity.

II.

The distinction between Sensation and Perception. Perception is the knowledge of the object presenting itself to the senses, whether in the object or beyond it. Sensation is the feeling associated, the feeling of the organism. These two always coexist. There is never this knowledge without an organic feeling; never a feeling of the organism without a cognitive apprehen-

sion of it.[1] These sensations differ widely from each other, as our consciousness testifies; some of them being pleasant, some painful; others indifferent as to pleasure and pain, but still with a feeling. Some we call exciting, others dull; some we designate as warm, others as cold; and for most of them we have no name whatever, — indeed they so run into each other that it would be difficult to discriminate them by a specific nomenclature. The perceptions, again, are as numerous and varied as the knowledge we have by all the senses. Now these two always mix themselves up with each other. The sensation of the odor mingles with the apprehension of the nostrils; the flavor of the food is joined with the recognition of the palate; the agreeableness or disagreeableness of the sound comes in with the knowledge of the ear as affected; and the feeling organ which we localize has an associated sensation. There is an organic sensation conjoined even with the knowledge we have of the extra-organic object affecting our muscular sense, or our visual organism. This sensation may be little noticed because the attention is fixed on the object; still, it is always there, as we may discover by a careful introspection of the combined mental affection. But while the two ever coexist, sometimes with the one prevailing, and sometimes with the other predominant, and sometimes with the two nicely balanced, it is of importance to distinguish them. Every man of sense draws the distinction between the music and the musical instrument, between the ear-ache and

[1] Reid represents the sensation as being "followed by a perception of the object;" on which Hamilton remarks, "that sensation proper precedes perception proper is a false assumption; they are simultaneous elements of the same invisible energy" (Reid's *Collected Writings*, p. 186. See, also, p. 853).

his ear. The metaphysician should also draw the distinction, — indeed, it is essential that he do so. The two were given for different ends. Our perceptions are the main means of supplying us with knowledge, whereas our sensations are meant to increase our enjoyment, to stimulate to exertion, to give warning, or perhaps to inflict penalties. We must beware, both philosophically and practically, of confounding our sensations and our perceptions, our feelings and our cognitions.

III.

The distinction between Affections in our Bodily Frame and the Causes, as we infer, of their production. Thus we have an affection of heat in our body, and we argue an external cause, which we also call heat. All that we know intuitively is the bodily affection. In regard to the nature of the cause, this can be discovered only by a scientific investigation. This is the case with the sense of smell, of taste, of touch, and temperature, — and I think also, though with some hesitation, with the sense of hearing. The intuitive conviction of cause and effect does indeed intimate that there must be a cause, but as to where that cause is to be found we must trust to experience, which tells us that in some cases it is to be found in the organism itself, and in other cases in an agent beyond, — such as odorous particles, sapid bodies, heat, undulations from a sounding body, or a solid object applied to our nerves of touch. In all cases the affection of sense and the conviction of cause combined are sufficient to prompt us to look round for an agent. The senses act as monitors — and most important monitors they are — of powers working in our bodily frames, and in the physical universe around us. I believe that every one of our senses gives us intimation

of powers, — such as floating particles, light, and heat, which are among the most powerful agencies conducting the processes of the material world. Still, these are unknown to our senses, and we become aware of their existence merely as causes of known effects. As to what odors, sounds, flavors, heat, and, we may add, light and colors are, our intuitions are silent, and their nature is to be determined by observation, indeed, can be determined only by elaborate scientific research.

This is the proper account of the distinction drawn between the PRIMARY and SECONDARY QUALITIES of matter, a real distinction, but often confusedly apprehended and expressed. The Secondary Qualities, such as heat and flavor, are not, properly speaking, properties of body, but affections of our vital frame. The causes are to be ascertained by physical investigation. To the question so often put, Is or is there not heat in that fire? I answer that the heat is primarily a felt affection of my body, and the cause of it, as ascertained by science, is a vibration in the ignited body.

The sense of sight presents peculiar difficulties in this connection. It seems to me clearly to look at an extended surface, not part of our organism, but affecting it. But what are we to make of color? It is the greatest difficulty which the metaphysician meets with in the investigation of the senses. The mind knows the perceived object to be in its nature extended; but do we also know it as in its very nature colored? If so, is there color in the object as there is extension? The following is the solution which I am inclined to offer of this difficult subject. The sense of color may be regarded as intermediate between those senses in which we perceive an extra-organic object, and those other senses which reveal merely the organism as affected, but whether by agents within or beyond the organism we know not. In the sense of color, we primarily know only the organism as affected, but we are intuitively led, at the same time, to look on what thus affects our organism as not in the organism, but as in the extended surface in which it is seen. But beyond this, that is

beyond color being an extra-organic cause of an organic affection, we know nothing of its nature by intuition. If this account be correct, we see that our sense of color is different, on the one hand, from the knowledge of our sensations of heat, or smell, or taste, for we do not know whether the causes of these are within or beyond the frame, while we do know that color is out of ourselves in a surface; and different, too, on the other hand, from the knowledge of the extended surface and the impenetrability which are revealed directly by the sight and muscular sense, whereas we do not know what color is. Hence arises, if I do not mistake, that peculiar conviction regarding color which has so puzzled metaphysicians. The sense of color combines, in closest union, the sensation and the perception, the organic affection and the extra-organic. I confess I have always fondly clung to the idea that, sooner or later, color will be found by physical investigation to have a reality — I do not say of what kind.

IV.

The distinction between our Original and Acquired Perceptions. In standing up for the trustworthiness of our perceptions, I always mean our original perceptions proceeding from the original principles of the mind, and having the sanction of him who gave us our constitution. The perceptions acquired by induction and inference will have a reality only when the processes have been validly conducted.

I have endeavored in the last chapter to give an approximately correct account of what seem to be our original perceptions through the various senses. But to our primitive stock we add others, and in doing so we employ rules derived from the generalizations of experience, and deductive reasoning in applying them to given cases. In taste we have originally only a sapid affection of the palate, but by experience we are able to declare that this particular sensation is produced by water and that other by wine. Intuitively we cannot say what sort of extra-organic object any smell comes from, but

by observation we have ascertained that this odor comes from the rose and that from the lily, and we guess at the distance of the object by the strength of the impression, and at the direction by finding it stronger in one nostril than in another. In hearing we ascertain the distance by the loudness of the sound, and the direction by finding it louder in one of the ears than in the other, or, as some suppose, by the affections of the semicircular canals, which are usually three in number, and lie in different planes. Since the days of Berkeley it has been all but universally acknowledged that the perception of linear distance from the eye is not an original endowment of the sense of sight.

Now in our original perceptions, when our organism is sound and we employ it properly according to its nature, there can be no errors, but there may be many human mistakes in our acquired perceptions.

By help of such distinctions we may defend the validity of our native convictions through the senses. We do not give an extra-organic validity to our organic affections. We stand up for a reality corresponding to our perceptions proper, but not, therefore, for the associated sensations. In regard to what are called the Secondary Qualities of matter, we maintain that we perceive the organic affections, but the extra-organic causes have to be determined by scientific observation. We stand up for the trustworthiness of our original but not necessarily of our acquired perceptions. The senses can be supposed to deceive us, when the organism and mind are in a sound state, only when we overlook one or other or all of these distinctions.

The Eleatics looked upon the senses as deceiving, and appealed to the reason as discovering the abiding (τὸ ὄν) amid the fleeting. The question arose: Since the senses are delusive, what reason have we

for thinking that the reason is trustworthy? Heracleitus the Dark thought that the senses give only the transient, and that man can discover nothing more. Plato mediated between the two schools, and thought that there were two elements in sense-perception, an external and an internal: Καὶ ὅ δὴ ἕκαστον εἶναί φαμεν χρῶμα, οὔτε τὸ προσβάλλον οὔτε τὸ προσβαλλόμενον ἔσται, ἀλλὰ μεταξύ τι ἑκαστῳ ἴδιον γεγονός· ἢ σὺ διϊσχυρίσαιο ἄν ὡς οἷον σοί φαίνεται ἕκαστον χρῶμα, τοιοῦτον καὶ κυνὶ καὶ ὀτφοῦν ζωῳ (*Theæt.* 28). Ἐγέννησε γὰρ δὴ ἐκ τοίοῦ τον. καὶ κυνὶ καὶ ὀτφοῖν ζωῳ (*Theæt.* 28). Ἐγέννησε γὰρ δὴ ἐκ τῶν προωμολογημένων τό τε ποιοῦν καὶ τὸ πάσχον γλυκίτητά τε καὶ αἴσθησιν, ἅμα φερόμενα ἀμφότερα (43). This theory has ever since been maintained by a succession of thinkers, including the school of Kant. Unfortunately they can give us no rule to enable us to distinguish between what we are to allot to subjective and what to the objective factors. Possibly the following passage, affirming that science is not in sensations but in our reasoning about them, may have suggested the theory of Aristotle, which has long divided the philosophic world with that of Plato: Ἐν μὲν ἄρα τοῖς παθήμασιν οὐκ ἔνι ἐπιστήμη, ἐν δὲ τῷ περὶ ἐκείνων συλλογισμῷ (107).

Aristotle, with his usual judgment and penetration, started the right explanation (see *De Anima*, Lib. III. Chap. i. iii. vi.). He says that perception by a sense of things peculiar to that sense is true, or involves the smallest amount of error. But when such objects are perceived in their accidents (that is, as to things not falling peculiarly under that sense), there is room for falsehood; when, for instance, a thing is said to be white, there is no falsehood, but when the object is said to be this or that (if the white thing is said to be Cleon), (*cf.* III. 1, 7) there may be falsehood: Ἡ αἴσθησις τῶν μὲν ἰδίων ἀληθής ἐστιν, ἢ ὅτι ὀλίγιστον ἔχουσα τὸ ψεῦδος· δεύτερον δὲ τοῦ συμβεβηκέναι ταῦτα· καὶ ἐνταῦθα ἤδη ἐνδέχεται διαψεύδεσθαι ὅτι μὲν γὰρ λευκὸν, οὐ ψεύδεται, εἰ δὲ τοῦτο τὸ λευκὸν ἢ ἄλλό τι, ψεῖ δεται (III. iii. 12). Ἀλλ' ὥσπερ τὸ ὁρᾷν τοῦ ἰδίου ἀληθές, εἰ δ' ἄνθρωπος τὸ λευκὸν ἢ μὴ, οὐκ ἀληθὲς αἰεί (III. vi. 7). Aristotle saw that the difficulties might be cleared up by attending to what each sense testifies, and separating the associated imaginations and opinions or judgments. The full explanation, however, could not be given till Berkeley led men to distinguish between the original and acquired perceptions of the senses, by showing that the knowledge of distance by the eye is an acquisition.

The views of the Stoics, Epicureans, and Academics may be gathered from the *Academic Questions* of Cicero. All of them sought to save the senses by a distinction of some kind. The Stoics represent

the senses as simply satellites and messengers (see Cicero, *De Legibus*, quoted Lipsius' *Manud. ad Philos. Stoic.* ii. 11), and place above them a power of comprehension, κατάληψις, which judges the information given by the senses. The Epicureans thought the senses never deceive, but then they give us things only as they appear. The Academics maintained that the intellect and not sense is the judge of truth: "Non esse judicium veritatis in sensibus, mentem volebant rerum esse judicem." They held "sensus omnes hebetes et tardos esse arbitrabantur, nec percipere ullo modo eas res, quæ subjectæ sensibus viderentur; quæ essent aut ita parvæ, ut sub sensum cadere non possent; aut ita mobiles et concitatæ, ut nihil unquam unum esse constans" (*Acad. Quæs.* i. 8), and so reality becomes a matter of opinion or probability.

Augustine follows out the views of the Greek philosophers, specially those of Aristotle. Thus in his exposition of *Categoriæ Decem ex Aristotele Decerptæ*, v.: "Sunt igitur illa quæ aut percipimus sensibus, aut mente et cogitatione colligimus. Sensibus tenemus quæ aut videndo, aut contrectando, aut audiendo, aut gustando, aut odorando cognoscimus. Mente, ut cum quis equum, aut hominem, aut quodlibet animæ viderit, quanquam unum corpus esse respondeat, intelligi tamen multis partibus esse concretum." He illustrates his meaning elsewhere: "Si quis remum frangi in aqua opinatur, et cum inde aufertur integrari; non malum habet internuntium, sed malus est judex. Nam ille pro sua natura non potuit aliter sentire, nec aliter debuit; si enim aliud est aer, aliud aqua, justum est ut aliter in aere, aliter in aqua sentiatur" (*Lib. de Ver. Relig.* c. 33). The subject is discussed *Contra Academicos*, 24–28. Anselm treats the subject in much the same way as Augustine (*Dialog. de Verit.* vi.). He says the error is to be ascribed, not to the senses, but to the judgment of the mind: "Falsitas non in sensibus sed opinione." It is the mind that imparts the false appearances, as the boy fears the sculptured dragon. "Unde contingit ut sensus interior culpam suam imputet sensui exteriori."

In modern times, metaphysicians have vacillated between the Platonic and Aristotelian theories; some, as Kant and Hamilton, making every perception partly subjective, and others ascribing the supposed deception to wrong deductions from the matter supplied by the senses. The Sensational School of France and T. Brown make all external perception an inference from sensations in the mind, and refer the mistakes to wrong reasoning.

CHAPTER IV.

APPARENT DECEPTION OF THE SENSES.

ALMOST all forms of idealism (the system which supposes certain of our supposed cognitions to be creations of the mind), and all forms of scepticism (the system which would set aside all our cognitions), plead the deceitfulness of the senses. Our senses are not to be trusted in some things, says the idealist, and we are to determine by reason when they are to be trusted. Our senses delude us in some things, says the sceptic, and we may therefore distrust them in all. It is of vast moment to stop these errors at the point at which they flow out, by showing that the senses, meaning our original perceptions through the senses, can all be trusted in regard to the special testimony which they furnish.

But how, it is asked, does the stick in the water, felt to be straight by the sense of touch, seem crooked to the sense of sight? The answer is, that the knowledge of the shape of an object does not primarily fall under the sense of sight, and that when we determine whether a stick is or is not straight, by the sense of sight, it is by a process of inference in which we have laid down the rule that objects that give a certain figure before the eye are crooked, — a rule correct enough for common cases, but not applicable to those in which the rays of light are refracted in passing from one medium to another. Why does a boy seem a man, and a man a giant, in a mist, whereas, if you clear away the mist, both are instantly reduced to their proper dimensions? A reply

can easily be given. We have laid down the rule that an object seen so dimly must be distant; but an object appearing of such dimensions at a distance must be large: and the phenomenon is felt to be a deception only by those who are not accustomed to move in the mist. Why does a mountain, viewed across an arm of the sea, seem near, while the same mountain, seen at an equal distance beyond an undulated country studded with houses and trees, appears very remote? The answer is, not that the eye has deceived us, but that we have made a mistaken application of a rule usually correct, that an object must be near when few objects intervene between us and it; and it is to be noticed that those who are accustomed to look across sheets of water commit no such mistakes, for they have acquired other means of measuring distance. Again, we have found it true, in cases so many that we cannot number them, that when we are at rest and the image of an object, say a carriage, passes across the vision, the object must be in motion. That rule is accurate in all cases similar to those from which it was derived; but it fails the landsman when, feeling as if he were at rest in the ship, he infers that the shore is moving away from the vessel. In all such cases we see that it is not the senses, that is, the natural and original perceptions of the senses having the authority of God, which deceive us, but rules formed or applied illegitimately by ourselves.

CHAPTER V.

THE ESSENTIAL QUALITIES OF MATTER.

LOCKE speaks of the Primary Qualities as being in matter in whatever state it may be. Reid speaks of them as being directly perceived by us. These two marks coincide, presenting the same truth under two different aspects, the one objective the other subjective. They are the essential qualities of matter known in all its states, and known at once and intuitively. They are two in number.

I. There are the Qualities of Matter by which it occupies Space and is contained in Space, that is, Extension. We have this knowledge, I believe, through each of our senses; for in each we know the corresponding organs as extended and out of each other, and through two of the senses we know objects beyond our bodily frame as extended. Hamilton represents extension as a necessary constituent of our notion of Matter, and evolves it from "two catholic conditions of matter: (1) the occupying space, and (2) the being contained in space. Of these, the former affords (A) Trinal Extension, explicated again into (I.) Divisibility, (II.) Size, containing under it Density or Rarity, (III.) Figure; and (B) Ultimate Incompressibility; while the latter gives (A) Mobility, and (B) Situation. Neglecting subordination, we have thus eight proximate attributes: 1. Extension; 2. Divisibility; 3. Size; 4. Density or Rarity; 5. Figure; 6. Incompressibility absolute; 7. Mobility; 8. Situation."[1]

[1] Hamilton's Reid, Note D, p. 848.

II. The Qualities which one body exercises in reference to another; in other words, the Properties or Forces of matter. I have expended much labor in vain if I have not shown, in previous sections, that here we have a necessary conviction. In the visual and locomotive senses, we know an extra-organic object as affecting us and our organism. All this seems to be involved in our perception, and to be a native conviction of the mind, to which it is ever prompted, and from which it can never be delivered. Not only so, we are ever led to look for a producing cause, even of our purely organic affections in the ear and palate and nostrils. A knowledge of power, and a conviction of power being in exercise, are thus involved in our very perceptions through the senses.

Adhering to these views, we must set aside at once two opposite doctrines which have had the support each of a number of eminent metaphysicians or metaphysical speculators. The one is that matter is known as possessing no other quality than extension. This error originated with Descartes, and has prevailed extensively among those metaphysicians who have felt his influence. But the view is opposed to that intuition which represents all matter as having and exercising energy. On the other side, there are speculators who maintain that all the phenomena of matter can be explained by supposing it to possess potency. This mistake sprang from Leibnitz, who supposed that the universe of matter (and of mind) was composed of monads having power, and to which the mind imparted the relation of space. But the dynamical theory of body, so far as it denies the existence of space, and body as occupying space, is utterly inconsistent with that fundamental conviction, of which the mind can never be shorn, which declares that the matter which has force must be extended, and

the force exercised is a force in a body in one part of space over another body in a different part of space.

"L'espace ou le lieu intérieur et le corps qui est compris en cet espace, ne sont différents aussi que par notre pensée. Car, en effet la même étendue en longueur, largeur et profondeur qui constitue l'espace constitue le corps" (Des. *Med.* p. ii. 10). Leibnitz held that bodies are endowed with some sort of active force. "Les corps sont doués de quelque force active." This force may be called life: "C'est une réalité immatérielle, indivisible et indestructible: il en met partout dans le corps croyant qu'il n'y a point de partie de la masse où il n'y ait un corps organisé, doué de quelque perception ou d'une manière d'àme" (*Op.* p. 694: ed. Erdmann). That he looked upon space as a relation will come out below.

CHAPTER VI.

OUR INTUITIVE KNOWLEDGE OF SELF OR SPIRIT.

I.

It is probable, though it never can be positively proven, that the first knowledge acquired by the mind is of our own bodily frame, through the sensitive organism, — a view which does not imply that, apart altogether from such perceptions, the spirit would not have operated. But whatever may be the theory formed on this speculative subject, it is certain that whenever or however the mind is aroused into an act of intelligence, there is always involved in the exercise a knowledge of self. Coëxisting with every intelligent act of mind there is always a self-consciousness. But let it be carefully observed that this knowledge is not of an abstract being or substance, or of an *ego*, or of an essence, but of the concrete self in the particular state in which it may be, with the particular thoughts, sensations, or purposes which it may be entertaining at the time.

The language of Tennyson is often quoted: —

> "The baby new to earth and sky
> Has never thought that this is I."

There is a truth here, or rather a half truth, which leads to a mutilated account of the whole truth. Not till after the years of infancy are past does any one entertain an idea of self or mind apart from the operations of mind. No one is likely to pronounce the judgment till a doubt arises or a denial is made. But meanwhile there is a

knowledge of self in the midst of all the exercises of the mind. All our sensations and feelings, our judgments and reasonings, are known by us as our own. My pains are of myself and not of any one else. My pleasures are pleasures of my own and not of another. Let us observe and seek to evolve what is involved in the cognition of self.

II.

We know Self as having Being, Existence. The knowledge we have in self-consciousness, which is associated with every intelligent act, is not an impression, as Hume would say, nor a quality, as certain of the Scottish metaphysicians maintain, nor of a phenomenon in the sense of appearance, as Kant states it, but of a thing or reality. In affirming this we are simply bringing out and expressing what is embraced in our primitive cognition. No account which falls short of this can be regarded as a full exhibition of the facts falling under our eye when we look within. If any man maintain that all we can discover is a mere idea, impression, phenomenon, or quality of an unknown thing, I ask him for his evidence, and he must, in replying, call in the internal sense, and I can then show him that this sense, or cognitive power (for it is not a sense except in an abusive application of the term), declares that we know a something, or a thing with a positive existence.

This is a knowledge which cannot be explained, nor defined in the sense of being resolved into anything simpler, or founded on anything deeper. It is a simple element implied in every intelligent act, and not derived from any other act or exercise. It is a basis on which other knowledge may be reared, and not a superstructure standing on another foundation.

As it is a primitive, so it is a necessary, conviction.

We cannot, by any other supposed knowledge, undermine or set aside this fundamental knowledge. We cannot be made by any process of speculation or ratiocination to believe that we have not being. The process of reasoning which would set aside this cognition can plead no principle stronger than the conviction which we have in favor of the reality of self.

In saying that we know self as possessed of being, we do not mean to affirm that we know all about self, or about our spiritual nature. There are mysteries about self, as about everything else we know, sufficient to awe every truly wise man into humility. All that is meant is, that, whatever may be unknown, we always know being whenever we know any of the objects presented to us from within or from without.

III.

We know Ourselves as Persons. Our perception of personality is closely connected with our knowledge of being, but there is more in personality than in being. We know material objects as having existence, but we have a special apprehension in regard to self beyond what we have in regard to material objects. Like every other simple perception, it cannot be defined, but it may be brought out to separate view by abstraction; and consciousness (with memory) will recognize it as one of the cognitions which it had seen before in company with others. We express this conviction when we say we are persons. The abstract idea is one not likely to be spontaneously formed. The infant, the child, the savage, are not in the habit of making any such analysis of consciousness, nor are the great body of mankind at the trouble of asserting their own existence. Such a proposition, with its subject and predicate, will be formed only after phi-

losophy has taken a shape, — probably only after sophistry and scepticism have been attacking our original convictions. It is only the metaphysician who will ever take the trouble of affirming that he exists, and the wise metaphysician will refrain from going further, and trying to prove that he exists.

Yet it is a conviction which the mind ever carries with it; it is one of the high characteristics of humanity. Inanimate matter is without it. The brute shows that he is tending towards it, yet can have it only in an incipient degree. It is an essential characteristic of the man's individuality, and is one of the main elements in his sense of independence, in his sense of freedom, in his sense of responsibility. As possessing it, man feels that he is independent of physical nature; independent of all creature intelligences; independent, in a sense, of God, against whom, alas! he may rebel, and to whom he must for certain give an account. It is a conviction to be used and not abused. It would certainly be perverted were it to seduce man to isolate himself from the objects around him, to try to become independent of the provisions made in physical nature to aid his weakness, or to separate himself from his brothers or sisters of humanity; and still more, were it to tempt him to rebel against God. It is properly used when, under the guidance of moral law, it is leading him, not to be ever floating on with the stream, but at times to be standing up in the midst of it and acting as a breakwater in its current, or as a martyr seeking to stem the tide of corruption, or, Prometheus-like, rising up, not against the true God, but against the false gods who rule in Olympus. Powers hostile to the progress of humanity have sought to subdue this principle. Absolutism would crush it, and make man live for some slavish end, political or ecclesi-

astical. Pantheism would dissipate it till man loses all individuality, and becomes relaxed, as he moves listlessly, in a hot and hazy atmosphere. It is this conviction which makes man feel that he is not a mere bubble on the surface of being, blown up in one chance agitation, and about to be absorbed in another. It keeps man from being lost, — lost in physical nature, lost in the crowd of human beings, or lost in the ocean of being: he is, after all and amid all, a person. As such he has a part to act, an end to serve, a work to do, a destiny to work out, and an account to render.

The cognitions which have been unfolded in this chapter form, when memory begins to be exercised, the ground of our recognition of our personal identity, and lead us to believe in a self which abideth amid all changes of thought, and mood, and feeling. This subject will be resumed by us under the head of Primitive Judgments (*a*).

IV.

We know Self as not depending for its existence on our Observation of it. Of course we can know self only when we know self; our knowledge of self exists not till we have the knowledge, and it exists only so long as we have the knowledge. But when we come to know self, we know it as already existing, and we do not look on its continued existence as depending on our recognition of it.

V.

We know Self as being in itself an Abiding Existence. Not that we are to stretch this conviction so far as to believe in the self-existence of mind, or in its eternal existence. We believe certainly in the permanence of mind independent of our cognition of it, and amidst all the shiftings and variations of its states. Yet

this does not imply that there never was a time when self was non-existing. For aught this conviction says, there may have been a time when self came into existence: another conviction assures that when it did, it must have had a cause. It must be added, that this conviction does not go the length of assuring us that mind must exist forever, or that it must exist after the dissolution of the body. Intuition does indeed seem to say that, if it shall cease to exist, it must be in virtue of some cause adequate to destroy it; and it helps to produce and strengthen the feeling which the dying man cherishes when he looks on the soul as likely to abide when the body is dead. But as to whether the dissolution of the bodily frame is a sufficient cause of the decease of the soul, — as to whether it may abide when the bodily frame is disorganized, — this is a question to be settled not altogether by intuition, but by a number of other considerations, and more particularly by the conviction that God will call us into judgment at last, and is most definitely settled, after all, by the inspired declarations of the Word of God. But it is pleasant to observe that there is an original conviction altogether in unison with this derivative belief, a conviction leading us to look on self as permanent, unless there be a cause working adequate to its dissolution.

According to the views presented under these heads, the existence of self is a position to be assumed, and not to be proven. It does not need proof, and no proof should be offered; no mediate proof could be clearer than the truth which it is brought to support.

VI.

We know Self as exercising Potency. We have seen that we know it as having being; but we know it further

as having active being. We know it as acting, we know it as being acted on, we know it as the source of action. Even in sense-perception we know it as being acted on from without; nay, we know it as itself acting in producing the result. So far as we know objects acting on it, we know it as capable of being influenced; in other words, as having a capacity of a particular description. So far as we know it acting in producing changes in itself or other things, we know it as a potency, as having power. When we recollect, when we fix the thoughts on a particular object, when we fondly dwell on a particular scene, we are exercising power, and by consciousness we know that we are doing so. When in consequence of coming to know of events bearing upon us personally, — say of some blessing about to descend, or calamity about to befall, — we rejoice or grieve, an effect is experienced. This conscious potency is especially felt in all exercises of the will, whether it be directed to the mental action which we wish to stay or quicken, or the bodily organism which we propose to move. I demur, indeed, to the view maintained by some philosophers of eminence, that our idea of power is obtained exclusively from the consciousness of the power of will over the muscles. But I am persuaded that our most vivid conviction of power is derived from the influence of the will both on bodily and mental action, and that the influence of the will on the organism is what enables us to connect mental with bodily action (*b*).

But here it will be necessary to offer an explanation to save ourselves from obvious difficulties, which many have not seen their way to overcome. We shall find, under another head, that while we believe intuitively that every effect has a cause, we do not know by intui-

tion what the cause is apart from experience; and that while we are convinced that the cause produces the effect, it is only by experience we know what the effect is. It follows that we do not know intuitively what or how many powers must concur to produce a given effect. This qualification will be found to have a great significance imparted to it by the circumstance to be afterwards noticed, that in order to most creature effects there is need of a concurrence of causes, or of a concause. When I will to move my arm, I know that the will is one of the elements in producing the effect, but I do not know, till physiology tells me, how many others must coöperate. It follows that one of the elements of a complex cause may act and no effect follow, because one part of the concause is absent. I may will to take a cheerful view of everything, and yet not be able, owing to the rise of gloomy thoughts. I may will to move my arm, and yet the arm may not move, because paralysis has cut off the concurrence of the organism. This subject will again come before us under various aspects.

VII.

We know the Knowing Mind to be different from the Material Object known, whether this be the organism as affected or the object affecting it. Not that we know by intuition wherein the difference lies; not that we are in a position to say whether they may not, after all, have points of resemblance, and a mutual dependence, and a reciprocal influence; on these points our only guide must be a gathered experience. But in every act in which we know a bodily object, we know it to be different from self, and self to be different from it. This is a conviction which we can never lose, and of which no sophistry can deprive us. We carry it with us at all

times, and wherever we go. It makes it impossible for any man to confound himself with the universe, or the universe with him. Man may mistake one external object for another, but it is not possible that he should mistake an external object for himself, or identify himself with any other object. This conviction is thus a means, as shall be shown later in the treatise, of delivering us from the more common forms of idealism, and from every form of pantheism.

VIII.

We know Self in every One of its States, as these pass before self-consciousness. And herein lies an important difference between the knowledge we have of mind, and the greater portion of the knowledge we have acquired of the material universe. The knowledge which we have of matter by intuition is extremely limited. What we thus know, indeed, is supremely valuable, as the ground on which we erect all our other information; still it is in itself very narrow, being confined to an acquaintance with our organism as extended and as exercising an influence on the mind, and to objects immediately in contact with it. The greater part even of the knowledge which we have of our organism, and of objects in contact with it, is derivative; and there is a process of inference in all that we know of objects at a distance, — of sun, moon, stars, of hills, rivers, valleys, and of the persons, and countenances, and conversations of our friends. But in regard to our own minds, we know all the individual facts directly and intuitively. We gaze at once on the mind thinking, imagining, feeling, resolving. In this view it may be safely said that we know more of certain of the states and of the action of the mind than we know of the whole material uni-

verse, even in this age of advanced science. It should be added, in order to save the remark from appearing to some incredibly extravagant, that while we thus know spontaneously so much about the workings of the mind, the majority of men think far more about their objective than their subjective knowledge.

(*a*) "This self-personality, like all other simple and immediate presentations, is indefinable; but it is so because it is superior to definition. It can be analyzed into no simpler elements, for it is itself the simplest of all; it can be made no clearer by description or comparison, for it is revealed to us in all the clearness of an original intuition, of which description and comparison can furnish only faint and partial resemblances" (Mansel, *Prolegomena Logica*, p. 129; see, also, *Metaphysics*). It was the greatest of all the oversights of Kant that he did not give personality a place among the intuitions of the mind, to which it is entitled quite as much as space and time. Held in by no primary belief in personality, those who came after, such as Fichte, Schelling, and Hegel, wandered out into a wide waste of Pantheism. Taking with them no belief in the personality of self, they never could reach personality in God.

It has been keenly disputed how we are to understand the "Cogito, ergo sum" of Descartes. Are we to regard it as a process of reasoning? If it be so, it is either a *petitio principii*, or its conclusiveness may be doubted. If the *cogito* be understood as embracing *ego*, that is, be understood as *ego cogito*, then the *ego* is evidently involved in it, is in fact assumed. If it means anything short of this, then it might be difficult to establish the accuracy of the inference; thus, if the *cogito* does not embrace the *ego*, it is not clear that the conclusion follows. Or are we to regard the statement as a sort of primitive judgment, not implying mediate reasoning or a middle term? Taken in this sense, I would reckon that the connection between thought and existence is involved in our knowledge of self as existing, rather than that the knowledge of self issues from the perception of the connection between thought and personal existence. Or are we to look on the expression as simply a mode of stating an assumption? In this case, the word *ergo*, the usual symbol of inference, comes in awkwardly; and besides, the truth to be assumed is not the complex judgment, *cogito, ergo sum*, but the fact revealed at once to consciousness of *ego*

cogitans. This primitive cognition may be the ground of a number of judgments, but it is to reverse the order of things entirely to make any one of these judgments the ground of the cognitions.

Kant has a powerful criticism of the "Cogito, ergo sum," considered as an argument, in his Paralogismen in the *Kritik.* See the subject discussed by M. Cousin, Prem : Ser : tome 1.

In answering the objections of Gassendi, Descartes says : "Cum advertimus nos esse res cogitantes, prima quædam notio est quæ et nullo syllogismo concluditur ; neque etiam quis dicit 'Ego cogito, ergo sum, sive existo,' existentiam ex cogitatione per syllogismum deducit, sed tanquam rem per se notam simplici mentis intuitu agnoscit."

Buffier gives the correct account with his usual clearness : "C'est par une même perception de notre âme que nous éprouvons le sentiment intime et de notre pensée et de notre existence" (Buffier, *Prem. Vér.* p. i. c. i.).

The Scottish School generally maintains that we do not know mind and body, but only the qualities of them. Reid indeed says, "Every man is conscious of a thinking principle, or mind, in himself" (*Collected Writings*, p. 217). Campbell, in his *Philosophy of Rhetoric*, speaks of consciousness being concerned with "the existence of mind itself, and its actual feelings," etc. (Book I. Chap. v. But this language is not free from ambiguity. Reid says that "sensation suggests to us both a faculty and a mind, and not only suggests the notion of them, but creates a belief of their existence ;" and he defends the use of the word "suggest," which I reckon a very unfortunate one in such an application (*Collected Writings*, pp. 110, 111). This view is carried out and elaborated by D. Stewart : "It is not matter or body which I perceive by my senses, but only extension, figure, color, and certain other qualities, which the constitution of my nature leads me to refer to something which is extended, figured, and colored. The case is precisely similar with respect to mind. We are not immediately conscious of its existence, but we are conscious of sensation, thought, and volition, operations which imply the existence of something which feels, thinks, and wills" (*Elem.* Vol. I. p. 46; see also Vol. II. p. 41, and *Phil. Essays*, p. 58).

Kant holds that the inner sense gives no intuition of the soul as an object. "Der innere Sinn, vermittelst dessen das Gemüth sich selbst, oder seinen inneren Zustand anschaut, giebt zwar keine Anschauung von der Seele selbst, als einem Object" (*Kr. d. r. V.*

p. 34). He speaks of the subject envisaging itself, not as it is but as it appears: "Da es denn sich selbst anschaut, nicht wie es sich unmittelbar selbstthätig vorstellen würde, sondern nach der Art wie es von innen afficirt wird, folglich wie es sich erscheint, nicht wie es ist" (*Zw. Aufg.* p. 718). He says that by the inner sense we know the subject self as phenomenon, and not as it is in itself: "Was die innere Anschauung betrifft, unser eigenes Subject nur als Erscheinung, nicht aber nach dem, was es an sich selbst ist, erkennen" (*Ibid.* p. 850). Dr. Mansel has done great service to philosophy by maintaining so clearly and resolutely, in his *Prolegomena Logica* and *Metaphysics*, that we intuitively know self. "I am immediately conscious of myself seeing and hearing, willing and thinking" (*Prol. Log.* p. 129). Hamilton speaks of our being conscious every moment of our existence, and of the *ego* as a "self-subsistent entity" (*Metaph.* Lect. 19).

(*b*) It can be shown that Locke consistently or inconsistently states that we know power as being in body, but especially in mind. "Bodies by our senses do not afford us so clear and distinct an idea of active power as we have from reflection on the operations of our own mind." In deriving our idea of Power from Sensation and Reflection he supposes the mind to be actively and intelligently exercised. "Whatever change is observed, the mind must collect a power somewhere to make that change" (*Essay*, II. xxi. 4). But Locke has omitted to inquire what it is in the mind which insists that *it must collect a cause wherever there is a change.*

Hamilton admits all I am pleading for. "I know myself as a force in energy, the not-self as a counter-force in energy" (Note D, p. 666, of Ap. to Reid). And again we have a perceptive power of the secundo primary quality of resistance in an extra-organic force as an immediate cognition" (p. 883). Is this statement an essential part of his doctrine, or an incidental admission? If part of his system, it should modify the view he has given elsewhere of our conviction of power as being a mere impotency (see Appendix to *Discuss.*). If it be inadvertent, it is a proof that truth will come out of honest men in spite of the errors of their system.

CHAPTER VII.

SUBSTANCE.

I.

SIR W. HAMILTON remarks that the word "substance" may be "viewed as derived from *subsistendo*, and as meaning *ens per se subsistens* (οὐσια in Greek): or it may be viewed as the basis of attributes, in which sense it may be regarded as derived from *substando*, and *id quod substat accidentibus;* like the Greek ὑπόστασις, ὑποκείμενον. In either case it will, however, signify the same thing viewed in a different aspect." With this latter statement I cannot concur. In the first of these senses there is such a thing as substance, and its characteristics can be specified. But I can see no evidence whatever for the existence of any such thing as a substance in the other sense, that is, as a *substratum* lying in and beyond, or standing under, all that comes under our immediate knowledge. There is no topic on which there has been a greater amount of unsatisfactory language employed than on this. We know, it is said, only qualities, but we are constrained by reason, or by common sense, to believe in a something in which they inhere. Or qualities, it is said, fall under sense, while substance is known by νοῦς, or reason. Others, proceeding on these admissions, maintain that, qualities alone being known, we may doubt whether there is such a thing as substance, and may certainly affirm that we can never know it. Now in opposition to all this style of thinking and writing, which has prevailed to so great an

extent since the days of Locke, I maintain that we never know qualities without also knowing substance. Qualities as qualities distinct from substance are as much unknown to us as substance distinct from qualities. We know both in one concrete act.

All that the metaphysician can do in regard to substance is to show that our cognition of it is original and fundamental, and to evolve what is contained in the cognition. He should not attempt to prove how it is so and so (the διότι of Aristotle), but he may show that it is so and so (the ὅτι of Aristotle). He could not give the dimmest idea of it to one who had not already the knowledge, but he may separate it by analysis from the other cognitions with which it is combined, and make it stand out distinctly to the view. He may so weigh and measure it as to show its extent and boundary, and deliver it from those crudities in which speculators have incrusted it. The following is the best analysis I am able to furnish.

II.

In all knowledge of substance there is involved BEING or EXISTENCE, not of being in the abstract, but of something in being. This we have seen is an essential element in our cognition, both of mind and body. The mind starts with knowledge, and with the knowledge of things as existing. This is the foundation, the necessary foundation, of all other exercises. If the mind did not begin with knowledge, it could not end with knowledge. In particular, if it had not knowledge in the concrete, it never could reach knowledge in the abstract. If there were not a knowledge of things in the premises with which we set out, there never could be knowledge in the conclusion. But having knowledge, obtained by intuition, to set out with, we find that when we proceed

legitimately — that is, according to the laws of thought — in our discursive exercises, we have always reality in the conclusion.

Those who assert that substance has a *substratum*, a something standing under it, have caught a glimpse of a truth which however they have not fully comprehended. All substance has a Being which combines and gives a unity to what is embraced in it.

III.

In all knowledge of substance there is involved Active Power. We cannot know self, or the mind that knows, except as active, that is, exerting power, or as being affected. Nor can we know material objects except as exercising or suffering an influence, — that is, a certain kind of power. They become known to us as having a power either upon ourselves or upon other objects, and we express this when we say that we know matter by its properties.

This is a doctrine which has been opposed by a large school of metaphysicians that have felt directly or indirectly the influence of Descartes, who represented extension as the essence of matter. This oversight has marred their whole speculations, and landed them in innumerable difficulties. For, not finding power in our original cognitions, they have either with the sceptic Hume denied that we have any such cognition, or with Kant they have made it a form which the mind imposes on objects. Still a large amount of authority can be pleaded in behalf of the doctrine, that power is involved in our idea of substance. It is the expressed view of Locke. It is maintained by Leibnitz with all the ingenuity of his speculative genius. Even Kant acknowledges (though, from the subjective character which he ascribes

to our intuitive convictions, he can turn it to no profitable account) that cause is involved in our idea of substance. It has been incidentally admitted by many who have theoretically denied it.

IV.

There is involved in our knowledge of substance a conviction of its having a PERMANENCE. This proposition must be very guardedly stated. By being loosely and inaccurately announced, it has led to very erroneous and dangerous doctrines. But there is a truth here, if we could only properly apprehend and express it. A substance is not a spectre which appeared when we began to see it, and which may cease to exist when we have ceased to view it. This conviction is at the basis of the belief in the abiding nature of every existing thing, amid all the changes which it may undergo. However a piece of matter may be beat or cut mechanically, we do not believe it to be destroyed. However it may be evaporated or decomposed by heat or chemical processes, we are not convinced that it is annihilated. When the moisture on the earth disappears, we do not therefore conclude that it has vanished into nothing; we look for it in a new form, and our expectation is gratified when we discover it in the vapor of the atmosphere or the cloud. When fuel is put on the fire it gradually disappears from the view, but we inquire for it elsewhere, and find it in the ashes and in the smoke. Our conviction of the abiding nature of self is still more deeply rooted and fixed. We believe in its continuance amid all the changes of thought and sensation, mood and feeling, lethargy and activity.

But while there is all this in our apprehension of substance, there is not more than this, and the errors

have arisen from supposing that there is more. In particular, our conviction does not require us to believe either in the necessary existence of every substance, or in its indestructibility. Our intuition does not say whether it has or has not been created, whether it does or does not need the Divine power to maintain and uphold it, whether it may or may not be destroyed. It does not entitle us to affirm that matter must have existed forever, or must, if formed, have been fashioned out of preëxisting materials. Nor does it say how long it has existed, or how long it will exist. An analogous intuitive conviction — that of cause — says that if produced, it must have been produced by a cause; that if destroyed, it must be by a power independent of itself. Hence we cannot assert positively, when we see a substance, say a piece of burned coal, disappearing from our view, that it must still exist, for in the operation of combustion there may have been a power to destroy it; all that we can affirm is, that the substance did not vanish of itself. All that our intuition guarantees is, that in itself substance has permanence, and that, if destroyed, it must be by something *ab extra*.

V.

According to the account now given, the Conscious Self or Spirit must be a substance. We know it as having being, we know it as having power and permanence. While it has these, it is to be studiously noticed that we do not know it to have all, or indeed any, of these independently. For aught our intuition says, it may be dependent for all of these on the creative power or concurrent power of God. Not only so, it may, for anything our intuition intimates, be dependent for some of these on its association with the bodily organism in

this present state of things. If we wish to settle these questions, we must look to other circumstances and considerations.

Many metaphysicians have felt greater difficulty in allowing that Matter is a substance. But, explaining substance as has been done in this section, it is entitled to be so regarded. It, too, has being, power, and endurance. We can deny this only by refusing to follow our native convictions. But in standing up for the substantial nature of body, it is still more necessary than in the case of spirit to bear in mind the qualifications under which we make the statement. We cannot affirm of matter that it has derived its characteristics from no source independent of itself. Nor can we declare of it that it can subsist of itself, and independent of the co-operating power of mind, that is, the Divine Mind. We are stretching intuition altogether beyond its province if we make it pronounce oracular decisions on any such questions.

But are mind and matter different substances? I reply that there are certain positions on this subject which can be defended against all opposition. *First*, in the cognition of the knowing mind, which ever coexists with our cognition of matter, we always know the two to be different. When we look at these hills we have ever an accompanying cognition of self as looking at the hills, and we know the hills to be different from self, and self to be different from the hills. *Secondly*, we know that the very things by which substance is characterized — existence, potency, and permanence — are not the same in the case of mind and body. Thus, the being of mind is not the same with that of matter, nor are the powers of mind the same with those of matter, nor does the permanence of body depend on human beings

observing it, nor can it be shown that the permanence of mind depends on the permanence of the bodily frame. With these proofs or presumptions in our favor, we may surely throw the *onus probandi* of proving that they are the same substance on our opponents. But *thirdly*, all attempts to resolve mind into matter, or matter into mind, have utterly failed. If we deny that matter has an existence independent of the contemplative mind, we are trampling on one of the intuitions of our nature. Those who resolve mind into matter always overlook the very essential qualities of the knowing, the conscious, the thinking, the moral, the responsible soul. We are thus entitled, from all we can know of substance, to declare them to be different substances. As to whether they may not, after all, have some unity in the view of higher intelligences, who take a deeper view of substance, this is a question which we need not start, for we cannot settle it; the alleged unity must be such that we can never discover nor comprehend it. It is enough for us that they are different substances in all the characteristics of substance known to us.

By the limitations drawn above, we are saved from certain pernicious consequences which were supposed to follow from the doctrine of Descartes. According to him, a substance is that which subsists of itself, which has no need of anything else in order to its existence.[1] Proceeding on this definition, Spinoza labored to show that there was and could be only one substance, of which everything is an attribute or a mode. The school of Descartes sought to save themselves from this pantheistic consequence by

[1] "Per substantiam nihil aliud possumus, quam rem quæ eta existet, ut nulla alia re indigeat ad existendum. Et quidem substantia quæ nulla plane re indigeat, unica tantum potest intellige nempe Deus. Alias vero omnes non nisi ope concursus Dei existere posse percipimus" (Prin.: Phil: I. 51.) He speaks of created substances, "quod sint res quæ solo Dei concursus egeunt ad existendum." Ib. 52.

various devices. To me it appears that we must amend the definition of Descartes, and reject the definition of Spinoza, and then all the conclusions founded on them must fall to the ground. "I understand," says Spinoza, "by substance, that which is in itself and conceived by itself; that is to say, that of which the concept can be formed without having need of the concept of any other thing."[1] There is a whole aggregate of things jumbled in this definition. That which is in itself is one thing; that which is conceived by itself is another thing, which is not necessarily the same as that which is given in explanation, viz., that of which a concept can be formed without having need of the concept of any other thing. I object to our conviction in regard to substance being called a concept, a phrase denoting an abstract or general notion formed by a discursive process of the understanding: the conviction is an intuition. The intuition says of every substance that it is a thing or reality, but it does not say whence the reality has proceeded. It says that substance has power, but it does not say whence that power. No doubt a substance is a thing known (not merely conceived) in itself, but the same may be said of space and time, and everything apprehended intuitively. Having removed this definition out of the way, as not the expression of our intuitive knowledge, we leave the whole pantheism of Spinoza without a foundation. I am certain that our native conviction as to substance gives no countenance to pantheism of any kind. Our intuition says that substance has being, but it does not say that it is underived, or whence it is derived. It says that it has permanence, but does not say that it has not been created and that it cannot be destroyed.

"If any one will examine himself concerning his notion of pure substance in general, he will find that he has no other idea of it at all, but only a supposition of he knows not what support of such qualities which are capable of producing simple ideas in us; which qualities are commonly called accidents" (Locke, *Essay*, II. xxiii. 23). His view is thus fully expounded in his *Letter to Stillingfleet*: "Your Lordship well expresses it, — *We find that we can have no true conception of any modes or accidents, but we must conceive a substratum* or *subject wherein they are: i. e.* that they cannot exist or subsist of themselves. Hence the mind perceives their necessary connection

[1] "Per substantiam intelligo id quod in se est et per se percipitur hoc est id cujus conceptus non indiget conceptu alternus rei, a quo formari debeat."

with inherence, or being supported; which being a relative idea, superadded to the red color in a cherry, or to thinking in a man, the mind frames the correlative idea of a support. For I never denied that the mind could frame to itself ideas of relation, but have showed the quite contrary in my chapters about relation. But because a relation cannot be founded on nothing, or be the relation of nothing, and the thing here related as a supporter or support is not represented to the mind by any clear and distinct idea, therefore the obscure, indistinct, vague idea of thing or something is all that is left to be the positive idea which has the relation of a support or substratum to modes or accidents; and that general undetermined idea of something is by the abstraction of the mind derived also from the simple ideas of Sensation and Reflection; and thus the mind, from the positive simple ideas got by sensation or reflection, comes to the general relative idea of substance, which without these positive simple ideas it could never have." I have quoted this passage because it lets us see fully what Locke's precise theory is, and what are its defects. The mind gets all its ideas from sensation and reflection, but in comparing ideas it discovers necessary relations. Among these is substance, of which the idea is very obscure. Still the mind is led to suppose that there is such a thing acting as a support or *substratum*.

Berkeley admits the existence of all that we perceive: "That what I see, hear, and feel doth exist, that is to say, is perceived by me, I no more doubt than I do of my own being." But he adds: "I do not see how the testimony of sense can be alleged as a proof of the existence of anything which is not perceived by sense" (*Prin. Hum. Know.* 40). In particular, he is not satisfied that there is a material *substratum* to what we perceive or a *support* of it. "It is evident *support* cannot here be taken in its usual or literal sense, as when we say that pillars support a building: in what sense, therefore, must it be taken? If we inquire into what the most accurate philosophers declare themselves to mean by *material substance*, we shall find them acknowledge they have no other meaning annexed to those sounds but the idea of being in general, together with the relative notion of its supporting accidents" (16, 17). Now Berkeley is right in saying that we are not required to allow the existence of more than we perceive. But (1) he is wrong in maintaining that we can perceive nothing more than ideas in our own minds. "When we do our utmost to conceive the existence of external bodies, we are all the while only contemplating our own ideas" (23). Then

(2) he errs in not unfolding how much is comprised in the object as perceived by us; we perceive body as having being, power, and existence without us and independent of us. "It will be urged that thus much at least is true, to wit, that we take away all corporeal substances. To this my answer is, that if the word *substance* be taken in the vulgar sense for a combination of sensible qualities, such as extension, solidity, weight, and the like, this we cannot be accused of taking away. But if it be taken in a philosophic sense, for the support of accidents or qualities without the mind, then indeed I acknowledge that we take it away, if one may be said to take away that which never had any existence, not even in imagination" (37). Berkeley was misled throughout by following the Lockian doctrines that the mind perceives immediately only its own ideas, and that substance is to be taken merely as the support or substratum of qualities. It is important to add that Berkeley is wrong (as Brown also is) in holding that we perceive material substance "as a combination of sensible qualities." I am not aware that intuitively we perceive qualities separately or a combination of them; we know body as an existing thing with extension and solidity. Hamilton says, that when we think a quality we are constrained to think it "as inhering in some basis, substratum, hypostasis, or substance," which substance is represented as unknown: he speaks of being "compelled to refer it to an unknown substance" (*Discuss.* App. I. A). I hold that in the one concrete act we know both substance and quality.

CHAPTER VIII.

MODE, QUALITY, PROPERTY, *ESSENCE.*

Two great truths press themselves on the reflecting mind when it contemplates this world of ours. One, the more obvious, is the mutability of all mundane objects. Nothing seems to be enduring; all is perceived as fluctuating. This has been a favorite theme with poets, to whom it has furnished a succession of kaleidoscope pictures; moralists and divines have dwelt upon it, in order to allure us to seek for something more stable than this world can furnish; and even libertines have turned it to their own use, and exhorted us to catch the enjoyment while it passes, to shoot the bird on the wing: "Let us eat and drink, for to-morrow we die." Philosophies have been built on this doctrine of the fluctuation of all things. Heracleitus of Ephesus taught that all things are in a perpetual flux; that we cannot enter the same stream twice; whereon Cratylus corrected him, and showed that we cannot do so once. But there is another truth which has a no less important, indeed a deeper, place in the nature of things. In the midst of all these mutations objects have, after all, a permanence. Ever changing, they are yet all the while ever the same. Persons of deeper thought, or at least more addicted to abstraction, looking beneath the changing surface, dwell on this permanence, which they discover to be like the fixed mountain, while the changes are merely like the colors that pass over its surface; and some have so magnified it as to make it set aside the mutability. The Eleatics carried their doctrine so far as to maintain the

oneness and unchangeableness of all being. The founder of the school, Xenophanes, identified this immutable oneness with the Divine Being. His disciple, Parmenides, degenerating in religious faith, though superior to the master in logical power, narrowed this unity into metaphysical being. Zeno, who followed, showed his subtlety by pointing out the difficulties in which they are involved who maintain the existence of multiplicity and motion. The expansive mind of Plato wrestled with both these extremes, and sought by his doctrine of supra-sensible ideas, and an exuberance of subtleties, to establish a doctrine of being not inconsistent with multiplicity and change. In modern times Descartes and Spinoza have magnified the importance of Substance quite as much as the Eleatics did Being; while the great mass of physicists, and all the speculators of the Sensational School, never go down deeper than the fleeting, the superficial, and the phenomenal.

The wise and the only proper course is to assume both; to assume both as first truths. No attempt should be made to support either by mediate proof; each carries with it its own evidence. Neither can be set aside by any sophistical reasoning founded on the other. It is the business of philosophy not to attempt to discard either, but rather to give the proper account of each, when they will be seen not to be inconsistent. The doctrine of the permanence of objects is founded on being and substance. We must take a view of the other truth in this section.

Every substance, we have seen, is known as having being, power, and endurance. But every terrestrial substance is at the same time known as changing. Self changes as we look in upon it; the material world changes as we look out upon it. No attempt should be

made to explain *how* the two can coexist, the permanent and the changeable. For mind and body are known at one and the same time as both. The one is quite as much known, and therefore quite as conceivable ever afterwards, as the other; and there can be no difficulty (whatever metaphysicians may ingeniously urge in opposition) in conceiving of their compatibility, since they were ever known to exist together. It is one of the permanent characters, both of mind and body, that they are ever known as changing. Their liability to change is an element in their very nature. Now the appropriate term to express the given state of any one substance is MODE; or if we wish a convenient change of phraseology, *Modification*, *State*, or *Condition*.

From this account we see in what sense it is that substance implies mode, and mode implies substance. Mode implies substance, not only inasmuch as a state must be the state of something, but inasmuch as mode is the state of a substance liable to change, and so capable of manifesting itself in more than one phase. Substance implies mode, inasmuch as it must always be in a certain state, and is liable to be in different states. The maxim is more than a verbal one, more than a truism, more than an identical (analytic) judgment involved in the terms; it is a judgment affirming a truth intuitively discovered by the mind when looking at the things (a synthetic judgment a priori).

Every object is known not only as having being, but is known as having a certain being or nature. That by which it manifests itself to us may be something common to this one thing with other things, or it may be something peculiar to the thing itself. Every particular substance known is known as at least having being and potency and an abiding nature, and is known also as pos-

sessing peculiar or distinguishing attributes. That by which the object is thus known to us as in itself, or as acting, may be called a quality of the substance. Sir W. Hamilton speaks of the qualities of substance as "its aptitudes and manners of existence and of action."[1]

But let us properly understand the relation of the two, substance and quality. The two are ever known in one concrete act. Thus when at a given moment we know self as rejoicing, we do not know the self as separate, or the rejoicing as separate, but we grasp the self and the rejoicing at once. But then it is necessary for many purposes to distinguish between them, and we do so by analysis; indeed, the analysis is in a sense done for us naturally. For while self is rejoicing to-day, it may be grieving to-morrow. To express the distinction it is needful to have a nomenclature, and so we distinguish between the substance and the quality. Not that the substance can ever exist without the quality or the quality without the substance. On the contrary, the one implies the other. The substance must always have at least the qualities by which all substance is characterized, and it may have many others. The qualities must always be qualities of a thing having these characteristics. The maxim that the substance implies the quality, is thus a proposition of the same character as that the substance implies the mode.

The word "substance" may be used either as an abstract or a general term. As an abstract term it designates the thing as having the characteristics of substance, which I believe to be existence, potency, and continuance. As a general term it denotes all those things which have the characteristics of substance. Quality, too, may be employed as an abstract or a general term.

[1] *Metaph.* Lect. 8.

As an abstract term it denotes *that* in any given substance by which it acts or manifests itself. As a general term it denotes all the manifestations or actions of a substance. Some of these qualities are found in all substance: such are the characteristics of substance of which I have so often spoken. Others are peculiar to certain substances, or manifest themselves in certain substances at certain times. Particular qualities are known by us intuitively to be in mind or matter. Thus we know consciousness, personality, thought, and will, as in mind; while we know extension and incompressibility as being in matter: these may appropriately be styled Essential Qualities of spirit and body. Other qualities are discovered by a gathered experience. Both mind and body may have qualities which can never be known by us. As to the qualities which become known to us by experience, and the qualities concealed from us, we can never know whether any of them are, or are not, essential either to body or mind.

If this view be correct, we see that a wrong account is often given of substance and qualities, and the relation between them. Thus it is very common to say that substance is a thing behind the qualities or underneath them, acting as a substratum, basis, ground, or support. All such language is in its very nature metaphorical; the analogy is of the most distant kind, and may have a misleading character. The substance is the very thing itself, considered in a certain aspect, and the qualities are its action or manifestation. Again, it is frequently said that qualities are known, whereas substance cannot be known, or, if known, known only by some deeper or more transcendental principle of the mind. Now I hold that we never know quality except as the quality of a substance, and that we know both equally in one un-

divided act. This is a somewhat less mystical or mysterious account than that commonly given by metaphysicians, but is, as it appears to me, in strict accordance with the revelations of consciousness.

I have said that the term "quality" expresses all in the substance by which it acts or manifests itself. That in substance which acts is power, and in all substance (we have seen) is power. The term PROPERTY, which signifies peculiar quality, might, I think, in accordance with a usage to which it has of late been approximating more and more, be appropriated to express the powers of any given substance, as the power of thinking or feeling in mind, or of gravity or chemical affinity in body. To vary the phraseology, the word *Faculty* may be employed when we speak of mental powers, and *Force* when we speak of material powers. It is the business of science to determine by observation and generalization the powers or properties of mind and body.

Another phrase with the ideas involved in it requires to be explained here, and that is ESSENCE. It is a very mystical word, and a whole aggregate of foolish speculation has clustered round it. Still it may have a meaning. As applied logically to classes of objects, it has a signification which can be precisely fixed; it denotes the common quality or qualities which are found in all the members of the class. Thus the possession of four limbs is the essence of the class quadruped. It is to be remembered that when the class is one of what some logicians call Kinds, it is impossible to specify all the common qualities which go to constitute it. Thus we cannot tell all the attributes which go to make up such natural classes as those of metal, dog, or rose. All that we can do is to specify some of the more marked, which are signs of others. But for such logical purposes the phrase "common attribute" or "differentia" is the better, and is more frequently employed. It is in metaphysics that the word "essence" is supposed to have a place. Thus the question is often put, What is the essence of mind? or, What is the essence of body? or, What is the essence of this individual

mind, or of this piece of clay or chalk ? Now, we can answer such a question as this, only when we are allowed to draw distinctions and offer explanations. *First*, we may allowably conceive that every one object, and every class of objects, has an aggregate of things which go to constitute it, and we may with perfect propriety refer to such an essence as possibly or probably existing, but always on the distinct condition, forthwith to be specified more formally, that we do not speak of the essence as something which can be known by us in all its totality. Locke (*Letter to Stillingfleet*) takes Essences "to be in everything that *internal constitution*, or frame, or modification of the *Substance*, which God, in his wisdom and good pleasure, thinks fit to give to every particular creature when he gives it a being; and such essences I grant there are in all things that exist." *Secondly*, there are some things which we know to belong to the essence of certain objects ; thus we know that being, power, and permanence are essential to all substance, and that certain qualities, such as consciousness and thought, belong to mind, and certain qualities such as extension and incompressibility, to body. But we must ever guard against the idea that there may not be other qualities also essential to these objects. For, *thirdly*, the essence of a thing, at least in its totality, must always be unknown to man. How many things are united in body or mind, or in any individual mind or material object, — this can never be ascertained by human observation or ingenuity. In this sense it is proper in us to speak of the essence of things as being unknown to man ; meaning thereby, not that we cannot know the substance, which I maintain we do know, or that we cannot know some of the qualities which go to make up the essence, but merely that we cannot know what precisely constitutes the essence in its entireness. But, *fourthly*, we are not warranted to maintain that there must be something lying further in than the qualities we know, and that this one thing is entitled to be regarded as the essence of the object. We have no ground whatever for believing that there must be, or that there is, something more internal or central than the substance and quality which we know. True, there are probably occult qualities, even in those objects with which we are most intimately acquainted, but we are not therefore warranted to conclude that what is concealed must differ in nature or in kind from what is revealed, or that it is in any way more necessary to the existence or the continuance of the object. I have a shrewd suspicion that there is a vast amount of unmeaning talk in the language which is employed on this special subject

by metaphysicians, who would see something which the vulgar cannot discern, whereas they should be contented with unfolding the nature of what all men perceive. It is quite conceivable, and perfectly possible, that, though we should know all about any given material or spiritual object, we should after all not fall in with anything more mysterious or deep than those wonders which come every day under our notice in the world without, or the world within us.

CHAPTER IX.

BEING.

THE abstract notion of Being is one which the mind is not much disposed to fashion. As to many other abstractions, it is led naturally to form them; they are framed for it, or it is compelled by the circumstances in which it is placed to frame them. Thus I see an individual with a black coat one day, and with a gray coat the next, and I cannot but separate the man from his clothing. But in such high abstractions as Being, that which we contemplate is never, in fact, separated from any one thing. Still Being is an abstraction which we are constrained to make for philosophic purposes, and it was, in fact, formed so early as the age of the speculators of the Eleatic School. It is the one thing to be found objectively in all our knowledge. Hence in all our abstractions it is that which remains; in the ascending process of generalization it is the *summum genus*. This does not prove that Being can exist apart from a special mode of existence, or the exercise of some quality. Nor does it prove that we can know Being separate from a concrete existence. I hold the one as well as the other of these to be impossible. But in all knowledge we know what we know as having existence, which is Being.

I cannot give my adhesion to the opinion of those who speak so strongly of man being incapacitated to know Being. I have already intimated my dissent from the Kantian doctrine that we do not know things, but ap-

pearances; and even from the theory of those Scottish metaphysicians who affirm that we do not know things, but qualities. What we know is the thing manifesting itself to us, — is the thing exercising particular qualities. But then it is confidently asserted by Kantians that we do not know the "thing in itself." The language, I rather think, is unmeaning; but if it has a meaning, it is incorrect. I do not believe that there is any such thing in existence as Being in itself, or that man can even so much as imagine it; and if this be so, it is clear that we cannot know it, and desirable that we should not suppose that we know it. Of this I am sure, that those Neo-Platonists who professed to be able to rise to the discovery of Being in itself (which could only be the abstract idea of Being), and to be employed in gazing on it, had miserably bare and most unprofitable matter of meditation, whether for intellectual, or moral, or religious ends. But if any one mean to deny that we can know Being as it is, I maintain in opposition to him, and I appeal to consciousness to confirm me when I say, that we immediately know Being in every act of cognition. But then we are told that we cannot know the mystery of Being. I am under a strong impression that speculators have attached a much greater amount of profundity to this simple subject than really belongs to it. Of this I am sure, that much of the obscurity which has collected around it has sprung from the confused discussions of metaphysicians, who have labored to explain what needs no explanation to our intelligence, or to seek a basis on which to build what stands securely on its own foundation. I do indeed most fully admit that there may be much about Being which we do not know; much about Being generally, much about every

individual Being, unknown to us and unknowable in this world. Still I do affirm that we know Being as Being, and that any further knowledge conveyed to us would not set aside our present knowledge, but would simply enlarge it.

CHAPTER X.

EXTENSION.

THE knowledge of extension is involved in every exercise of sense-perception, even as the knowledge of personality is implied in every exercise of self-consciousness. We certainly cannot employ the senses of sight and muscular energy, — we cannot, I believe, perceive through any of the senses, — without knowing the object, be it the organism or something affecting the organism, as possessing extension, — always along with other qualities. This, then, is historically the origin of our idea of space, — that is, we have a perception of it in every cognition of body. But in this primitive knowledge we do not apprehend it as distinct from body. It is an extended and a colored surface, which we know through the eye; it is an extended body capable of resisting us, which we know through the muscular sense and locomotive energy; it is a set of organs localized and out of each other, that we know by the other senses. But by an easy intellectual act we can separate the extension from the impenetrability and the associated sensations. We are greatly aided in our apprehensions of empty space by certain exercises of sense-perception. For we have experience ever presenting itself of two bodies seen or felt, with nothing between obvious to the senses. True, scientific research shows that the interval is not a pure vacuum, that there is air, or ether, between the bodies; still it is in our apprehension a void, — that is, a space, with no perceived body to fill it. We are thus led to an apprehension of space as different

from body occupying space. We are not to look on the extension thus reached as an illusion, a nonentity, or as nothing. If we know, as I maintain we do, body in space, the space must have an existence (I do not say what sort of existence), just as much as the body has. When we separately contemplate the extension, we are contemplating a reality just as verily as when we perceive the body. It will not do to dismiss space summarily by describing it as a mere abstraction: in order to our apprehension of it there is need of abstraction, but it is an abstraction of a real part from a real whole.

To this cognition of space, and to every apprehension of it, there is attached a number of intuitive beliefs. It is the business of the metaphysician to unfold these in an inductive manner, and point out and determine their nature and laws as precisely as possible. This requires to be done in another Book of this Treatise, to which therefore I adjourn the further discussion of space, as it embraces a larger faith than it does of a cognitive element in our apprehension of it.

Prof. Bain maintains (*The Senses and Intellect*, 2d ed. p. 397), that the localization of our bodily feelings is the result of experience. I admit that it is by the muscular sense and the eye that we know the external configuration of our frame, and that it is by a gathered experience we connect this with the internal feelings. But I hold that we give an externality and a direction to our bodily sensations. Mr. Bain acknowledges that the body is to us an external object (p. 397). If so, it must be known in space. But it has never yet been shown how we can know an object as external to us and in space except intuitively. "I do not see," says Mr. Bain, in criticising Hamilton (p. 376), "how one sensation can be felt out of another without already supposing that we have a feeling of space." What we suppose is that in thus regarding the body as external and localizing the sensations we get the idea of space. It is a law of this localizing that the sensation is felt at the part of the body to which the nerve reaches. And "when different parts of

the thickness of the same nerves are severally subjected to irritation, the same sensations are produced as if the different terminal branches of these parts of the nerves had been irritated. If the ulnar nerve be irritated mechanically, particularly by pressing it from side to side with the finger, the sensation of pins and needles is produced in the palm and back of the hand, and in the fourth and fifth fingers. But according as the pressure is varied the pricking sensation is felt by turns in the fourth finger, in the fifth, in the palm of the hand, on the back of the hand, and both in the palm and on the back of the hand the situation of the pricking sensation is different according as the pressure on the nerves is varied, that is to say, according as different fibres or fasciculi of fibres are more pressed upon than others" (Müller's *Physiology*, pp. 745–747). Surely all this is instinctive, not acquired. So deep is the disposition to localize that it cannot be eradicated. "When a limb has been removed by amputation, the remaining portion of the nerve which ramified in it may still be the seat of sensations which are referred to the lost part." "These sensations are not of an undefined character; the pains and tingling are distinctly referred to single toes, to the sole of the feet, to the dorsum," etc. A case is quoted of a person whose arm had been amputated, and who declared twenty years after that "the sense of the integrity of the limb is never lost." There is appended a note by Baly: "Professor Valentin has observed, that individuals who are the subjects of congenital imperfection or absence of the extremities have nevertheless the internal sensations of such limbs in their perfect state. A girl aged nineteen years, in whom the metacarpal bones of the left hand were very short, and all the bones of the phalanges absent, a row of imperfectly organized wartlike projections representing the fingers, assured M. Valentin that she had constantly the internal sensation of the palm of the hand on the left side as perfect as in the right."

CHAPTER XI.

NUMBER.

We seem to derive our knowledge of number from our cognition of being, and especially from our cognition of self as a person. We know self as one object; we also know other and external objects as singulars. Already then have we number in the concrete, involved in this our primary knowledge. Every object known, and especially self, is known as *one*. Every other object known is known as another *one*. If we know self as *one*, then the external object which is known as different from self is known as a second *one*. The mind can now think of one object, and of one object + another object, or of two, and of one object + another object + another object, or of three. It can then, by a process of abstraction, separate the numbers from the objects, in order to their separate consideration. Not that it supposes for one instant that numbers can exist apart from objects, but it can separately contemplate them. *One* cannot exist apart from one object, or *two* from two objects, but the mind can think about the *one* or the *two* apart from the peculiarity of the objects. Its judgments and its conclusions in all such cases, if conducted according to the laws of thought, will apply to objects; that is, all its judgments regarding one, two, or a thousand, will apply to a corresponding number of objects. Having obtained in this way a knowledge of numbers in the concrete, and numbers in the abstract, the mind is prepared to discover relations among numbers in a man-

ner to be afterwards specified in the book on Primitive Judgments.

But before leaving our present topic, it may be proper to state that the mind has no such conviction of the existence of numbers separate from the objects numbered, as it has of space, distinct from the objects in space, or as it has of time, distinct from the events which happen in time; nor has it any intuitive belief as to the necessary infinity of objects or of numbers. True, it can set no limit to the number of objects, but it is not compelled to believe that there can be no limits, as it is constrained to believe that there can be no bounds to space or to time.

Aristotle places number among the sensibles perceived by the common sense (*De Anima*, II. 6; III. 1). He says each sense perceives unity: ἑκάστη γὰρ ἕν αἰσθάνεται αἴσθησις (III. 1, 5, ed. Trend.). Descartes makes number perceived by us in all perceptions of body (*Prin.* Part I. 69). Locke says of Unity or One: "Every object our senses are employed about, every idea in our understandings, every thought of our minds, brings this idea along with it" (*Essay*, II. xvi. 1). Buffier says that the knowledge that *I exist*, *I am*, *I think*, is in a sense the same as, or at least includes this, I am *one* (*Prem. Vér.* Part II. 10).

CHAPTER XII.

MOTION.

Our perception of motion is, as it appears to me, intuitive. But it supposes more than sense, or sense-perception, in the narrow sense of the term. It is probable that we have an apprehension of change of place, from the movement of our intuitively localized organs, — say from a member of the body being moved by the locomotive energy, as when I lift my arm; this perception will be especially apt to arise when we move the hand along organs to which a place has been given. Or we may apprehend an extra-organic body by the touch or muscular sense, and by the same sense feel our hand or some other extra-organic body passing over it. We may also get the perception by the sense of sight. The child touching a part of the body by its hand, will see the image of its hand moving to perform the act. Besides, the "image of our own body occupies, in nearly all pictures on our retina, regularly some determinate space in the upper, middle, or lower part of the field of vision;" it remains constant while the other images are seen moving. There is more here, however, than immediate cognition. There is a brief exercise of memory; we must, at the same time that we perceive the body as now in one place, remember that it was formerly in another place. There is an exercise, too, of comparison in noticing the relation between the object in respect of the place in which it has been, and the place in which it now is. And upon our discovering change of any kind

in the motion, the intuition of cause comes in to declare that there must have been active power at work. This is one of those cases which will come before us more and more frequently as we advance, in which cognitions, beliefs, and judgments mingle together; and yet the act can scarcely be described as complex, except in this sense, that on other occasions some of the parts can exist separately or in other combinations. The circumstance that these other elements conjoin in our conviction as to motion, will bring the subject before us in other parts of the Treatise.

Müller's *Physiology*, trans. by Baly, p. 1083. Aristotle places motion, like number, among the common sensibles; Descartes among the properties perceived in every perception of body (see places in last note); and Locke among the primary qualities of bodies, which are always in them (II. viii. 22). The young man operated upon by Dr. Franz for cataract, three days after the operation, saw "an extensive field of light, in which everything appeared dull, confused, and in motion." In a case reported by Dr. Wardrop, the woman returning home after the operation saw a hackney coach pass, and asked, "What is that large thing that passed us?" (See Abbott, *Sight and Touch*, p. 153.)

CHAPTER XIII.

POWER.

I HAVE been laboring to show, in the last chapter and in this, that power is involved in our knowledge of substance. We can never know either self, or bodies beyond self, except as exercising influence or potency. Not that we are to suppose that we have thus by intuition an abstract or a general idea of power; all that we have is a knowledge of a given substance acting. This seems the only doctrine in accordance with the revelations of consciousness. It is involved in the common statement that we cannot know substance except by its properties; for what are properties but powers acting when the needful conditions are supplied? I reckon it as an oversight in a great body of metaphysicians that they have been afraid to ascribe our apprehension of power to intuition. In consequence of this neglect, some never get the idea of power, but merely of succession, within the bare limits of experience, which can never entitle us to argue that the world must have proceeded from Divine Power; others have been obliged to find cause, not in any perception of the mind as it looks on things, but in some form imposed by the mind on subjects; while a considerable number hesitate and vacillate in their account, representing it now as an original conviction, and now as an acquisition of experience.

Wherever there is power in act, there is an effect. But the discovery of the relation between cause and

effect cannot be discovered except by an exercise of judgment. The discussion of the nature of our conviction of Power will be resumed under the head of Primitive Judgments.

It is by overlooking the varied attributes perceived by intuition, as specified in these last chapters, that J. S. Mill reaches his deplorably defective definitions of matter and mind. He says: "Matter may be defined a permanent possibility of sensations" (*Examination of Hamilton*, p. 198). No doubt there are accompanying sensations, but matter is perceived by us as a thing without us, extended and with potency in multiplied forms. Mind "is a series of feelings aware of itself." But we know it as vastly more: it is a series not only of feelings, but of perceptions of things, memories, imaginations, judgments, moral decisions, volitions. And then there is an *itself*, of which, it is acknowledged, we are aware, and this makes the whole a substance.

BOOK II.

PRIMITIVE BELIEFS.

CHAPTER I.

THEIR GENERAL NATURE.

I.

Our primary cognitions and beliefs are very intimately connected, and they run almost insensibly into each other. Yet they may be distinguished. The phrase "primitive cognition," when we find it needful to separate it from faith, might be confined in strictness to those mental energies in which the mind looks on an object now present, — say on body perceived by the senses, or on self in a particular state, or on a representation in the mind; and then "faith" would be applied to all those exercises in which we are convinced of the existence of an object not now before us, or under immediate inspection.

Philosophers have drawn the distinction between Presentative and Representative Knowledge. In the former the object is present at the time; we perceive it, we feel it, we are conscious of it as now and here and under our inspection. In Representative Knowledge there is an object now present, representing an absent object. Thus I may have an image or conception of Venice, with its decaying beauty, and this is now present and under the eye of consciousness; but it represents something absent and distant, of the existence of which I am at the same time convinced. When I was actually in Venice, and

gazed on its churches and palaces rising out of the waters, there would have been no propriety in saying that I believe in the existence of the city, — the correct phrase would have been that I know it to exist. I know, too, that I have at this moment an idea of Venice; but as Venice itself is not before me, the proper expression of my conviction is, that I believe in its existence. I maintain that whenever we have passed beyond Presentative Knowledge, and are assured of the reality of an absent object, there faith — it may be in a very simple form, but still real faith — has entered as an element. So far as I am conscious of an imaging of the past, or a judging of it, or a reasoning about it, my mental state is cognition; but so far as I am convinced of the existence of the absent object, my state of mind is belief. In such examples the faith is of a low order, and need not be distinguished from knowledge, except for the purposes of rigid science; but still faith is there, and there in its essential character; and he who would know what faith is, must view it in these lower forms, "which exist more simple in their elements," as well as in the higher, just as he who would know the nature of the plant or animal must study it in the lichen or zoöphyte. These are the incipient movements of a mental power which is capable of rising to the greatest heights of earth, and looking up to the heaven above, which can call before it all time, and go forth even into the eternity beyond.

According to this account we are said to know ourselves, and the objects presented to the senses and the representations (always, however, as presentations) in the mind; but to believe in objects which we have seen in time past, but which are not now present, and in objects which we have never seen, and very specially in objects which we can never fully know, such as an Infi-

nite God. The mind seems to begin, not with faith, but with cognition. It sets out with the knowledge of an external object presented to it, and with a knowledge of self contemplating that object. I cannot, then, agree with those who maintain that faith — I mean natural faith — must precede knowledge. I hold that knowledge, psychologically considered, appears first, and then faith. But around our original cognition there grows and clusters a body of primitive beliefs which goes out far beyond our personal knowledge. Knowledge is, after all, the root; but from this stable and more earthly ground there spring beliefs which mount in living power and in lovely form and color toward the sky.

II.

By this account we keep faith from being wrapt up in such a cloud as it often is. We see how it joins on to cognition and mingles with it. Faith, as the telescope, shows objects which unaided sense cannot discern, but still there is a personal knowledge, an eye to guarantee the accuracy of the vision. We have immediate knowledge always with us — we have self in a particular state or exercise; but rising from this we believe in an object which is absent, — in the loftier exercises of faith we believe in objects which we have never seen, and which we never can see in this world. We are thus prevented, too, from making faith a mere subjective feeling, and separating it from things. It is in regard to objects apprehended, and apprehended because we have known them, or have known others with like qualities, that we entertain faith. It is from the contemplation of such objects that we are led to believe that they have qualities which do not fall under our immediate cognizance. In a sense we know space, for it is present to us; cer-

tainly body occupying space is ever before the senses; but when we look on space as having no bounds, we are beyond the territory of knowledge, we have mounted into the region of faith.

An important question is here raised, Can there be faith without some idea of what is believed? I am convinced that there is always an apprehension of some kind in faith. Without an image or notion to fix on, there could be no faith. But to qualify this statement we must take along with us several other truths equally important. We may believe in truths which we cannot comprehend in the sense of knowing all their qualities and relations. In this sense it may be said that we cannot fully comprehend any one object in earth or heaven; for everything known to us has references to other things which are unknown; beyond every country known, there is to us a *terra incognita.* But there are objects which impress us with the conviction that we have scarcely any acquaintance with their nature, and that there is much in them or about them which is to us incognizable. Thus in the doctrine of the Trinity there is so much apprehended by us because revealed, but there is more which we try in vain to compass. We believe, too, in truths which we cannot reconcile with other truths; and we may adhere to them resolutely in spite of improbabilities and difficulties. I apprehend, indeed, that in all such cases our intellectual nature will constrain us to believe that there must be some method of reconciliation, though the link cannot be perceived by us. Were it shown in regard to any proposition that it is inconsistent with an acknowledged truth, I suppose our faith in it would vanish. Could it be demonstrated — which, however, it never has been — that a primary faith is contradicted by any other primary truth, I be-

lieve we should be landed in absolute scepticism. Further, we may believe objects to possess qualities of which we have no notion. Thus in heaven there are pleasures such as it hath not entered into the heart of man to conceive. Thus, too, on earth we often find effects proceeding from causes which are utterly unknown. Still even in such cases there is an apprehension; there is an apprehension of an object with a quality; there is an apprehension of a place with pleasures of a kind different from those which we enjoy on earth; there is the apprehension of a cause producing this effect. In such exercises the mind is impressed at times painfully, at times sublimely, with the inadequacy of its ideas to represent the object, and this is often one of the peculiar features of our faith, marking it out from our clear intellectual notions and judgments. In many of our faiths the mind sees but a speck of light in midst of circumambient darkness.

The two, knowledge and faith, differ psychologically, and there are important philosophic ends to be served by distinguishing them; but after all it is more important to fix our attention on their points of agreement and coincidence. The belief has a basis of cognition, the cognition has a superstructure of beliefs. The one conviction, equally with the other, carries within itself its validity and authority. No man is entitled to restrict himself to cognitions, and refuse to attend or to yield to the beliefs which he is also led to entertain by the very constitution of his mind. No man can do so, in fact. He who would do so must needs go out of the world. Every man must act upon his native beliefs as well as upon his cognitions. He requires no external consideration to lead him to trust in the one any more than in the other, for each has its sufficiency in itself. He who

would weakly give up his native faiths because assaults are made on them, and doggedly resolve to yield to nothing but immediate cognitions, will find that the sceptic who has driven him from the beliefs will go on to attack the cognitions likewise, and that he can defend the cognitions only on grounds which might have enabled him to stand by his credences likewise. On the other hand, I grieve over the attempts, for the last age or two, of a school of thinkers who labor to prove that the understanding, or the speculative reason, leads to scepticism and nihilism, and then appeal to faith to save us from the abyss before us. I have no toleration for those who tell us with a sigh, too often of affectation, that they are very sorry that knowledge or reason leads to insoluble doubts and contradictions, from which they are longing to be delivered by some mysterious faith. It is time to put an end to this worse than civil strife, to this setting of one part of the soul against another. I do not believe that the understanding, or the reason, or any other power of the mind, lands us in scepticism. Each cognitive faculty conducts in its own way to its own truths. The intelligence and the faith are not conflicting, but conspiring elements. I am sure that the criticism which has attacked the knowledge would, if followed out, be no less formidable in its assaults on the belief. In these pages I am endeavoring to show how they concur and coöperate, being almost always associated in one concrete act, which we analyze merely for scientific ends.

III.

But while we must yield to our intuitive beliefs as well as perceptions, we are not therefore to suppose that our faiths are beyond inspection and above examination. They are liable to be tried, and should at times be tried,

by the very same tests as our cognitions. We are not to allow ourselves, without examination and without review, to yield to whatever may suggest itself to our own minds, or be recommended to us by others, as a primitive belief. We must try the spirits, whether they are of God. In nothing is man so apt to run into excess and extravagance, into folly and error, as in yielding to plausible beliefs. The tendency of faith is upwards, but it needs weights and plummets to hold it down, lest it mount into a region of thin air, and there burst and dissolve. Fortunately we have a ready means at hand of trying our constitutional beliefs, and determining for us when they should be disallowed, and when they should be allowed to flow out freely. Are they self-evident? Are they necessary, — so necessary that we cannot believe the opposite? Are they universal? These three questions, searchingly asked and honestly answered, will settle for us whether we ought or ought not to follow a belief proffered to our acceptance. We are at liberty to employ a belief in argument, appeal, and speculation, only under the same conditions as a cognition; that is, having shown that it is a constitutional one, we must further determine more accurately its nature and law, its extent and limits. Thus, and thus only, can we hope on the one hand to be kept from mistaking our own fancies, misapprehensions, wishes, or prejudices for primitive and heaven-born beliefs, and, on the other hand, be justified in appealing to the faiths which have the sanction of our constitution, and the God who gave us our constitution, and in using them as a basis on which to rear a fabric of philosophical, or ethical, or theological truths.

The question is started, Whence the seeming mistakes of memory? We find at times two honest witnesses

giving different accounts of the same transaction. We have all found ourselves at fault in our recollections on certain occasions. I believe we must account for the seeming treachery of the memory in much the same way as we do for the deception of the senses. There ever mingle with our proper recollections more or fewer inferences, and in these there may be errors. In order to clear up the subject we draw the distinction between our natural or pure reminiscences and those mixed ones in which there are processes of reasoning.[1]

The distinction between Presentative and Representative Knowledge is drawn by Hamilton in his edition of Reid, Note B. The view given by me in the text seems to be in accordance with such language as the following, used by him in *Metaph.* Lect. 12: "Properly speaking, we know only the actual and the present, and all real knowledge is an immediate knowledge. What is said to be mediately known is in truth not known to be, but only believed to be." Speaking of memory, he says: "It is not a knowledge of the past at all, but a knowledge of the present and a belief of the past." Consistently or inconsistently, he says that "belief always precedes knowledge" (Lect. 3). Speaking of the external world, he says: "We believe it to exist, only because we are immediately cognizant of it as existing" (Reid, p. 750). With this I concur. But I cannot agree with what follows, where he seems to found our knowledge on a belief, and represents our knowing that we know as founded on a belief prior to or deeper than knowledge. "If asked, indeed, How do we know that we know it? . . . how do we know that this object is not a mere mode of mind illusively presented to us as a mode of matter? then indeed we must reply that we do not (?) in propriety *know* that what we are compelled to perceive as not-self is not a perception of self, and that we can only on reflection believe such to be the case, in reliance on the original necessity of so believing imposed on us by our nature."

Augustine gave a province both to knowledge and faith without very distinctly clearing up the boundaries: "Quamvis enim, nisi

[1] See this explained in my *Psychology: The Cognitive Powers*, pp. 163, 164.

aliquid intelligat nemo possit credere in Deum ; tamen ipsa fide qua credit, sanetur, et intelligat ampliora. Alia sunt enim quæ nisi intelligamus non credimus; et alia sunt quæ nisi credamus non intelligimus" (*Enar. in Psalm* 118). There were profound discussions in the scholastic ages as to the relation of faith and knowledge, but it was in regard to matters of religion, specially of revelation including church authority. Anselm gave the first or deeper place to faith : "Neque enim quæro intelligere ut credam, sed credo ut intelligam" (*Med.* 21). Abelard, on the other hand, maintained that we must begin with finding reasons to show the truth of Christianity, and thence reach faith, and go on to a higher cognition or intuition (*Theol.* 11). The discussion has been renewed from age to age ever since by theologians. Romanists and High Church Divines have commonly given the precedence to faith, and decided Protestants to knowledge. In particular, the Puritans represent a certain amount of knowledge as necessary to faith, but also add that faith has a powerful influence in increasing knowledge. Thus Charnock (*Knowledge of God*) : "There can be no act about an unknown object." "Faith cannot be without the knowledge of God and Christ." "Knowledge is antecedent to faith in the order of nature." There was confusion in this whole discussion owing to its not being determined psychologically what is the precise nature, and what are the differences, of knowledge and faith, and of reason and faith. In every exercise of mind about the great objects and truths of religion, there must be both cognitive and faith elements embraced, and reason always comprises faith when it refers to the existence of absent objects.

Kant labored to demonstrate that the Speculative Reason lands us in contradiction, and was not given us in order to reach objective truth; but then he called in a Practical Reason which guaranteed a moral law, a God, and immortality. See the Methodenlehre in the *Kritik of Pure Reason.* Jacobi admitted far too readily, to Kant and Fichte, that speculation and philosophy led to scepticism, but he fell back on Faith (Glaube) or Sentiment (Gefühl), which he represented as a Revelation (Offenbarung). See his *David Hume: Ueber den Glauben,* and *Jacobi an Fichte.* He has given views of intuition and of faith as true as they are beautiful ; but he has not unfolded the precise nature of faith, nor seen its relation to the understanding. Even Fichte, after trying to show that knowledge (Wissen) leads to an absolute idealism, in which we know not whether our very thought may not be a dream, resorts to Faith (Glaube), and

allows an appeal to the Heart (Hertz) (*Bestimmung des Menschen*, Buch III. Glaube). Sir W. Hamilton maintains that "all that we know is phenomenal of the unknown" (*Discuss.* p. 644, 2d ed.), and that "the knowledge of Nothing is the principle or result of all true philosophy" (p. 609), but delights to recognize a faith which looks beyond; not explaining, however what he means by faith. "We are warned," he says, "from recognizing the domain of our knowledge as necessarily coextensive with the horizon of our faith." And he adds: "And by a wonderful revelation we are thus, in the very consciousness of our inability to conceive aught above the relative and the finite, inspired with a belief in the existence of something unconditioned, beyond the sphere of all comprehensive reality" (p. 15). Hamilton is often appealing to faith, but has left a very imperfect account of it. "He adopts," as Mr. Calderwood acutely remarks, "the Kantian distribution, which embraces the mental phenomena under the three divisions of Cognition, Feeling, and Appetency. The first embraces the phenomena of knowledge; the second, of pleasure and pain; and the third, of will and desire. If, then, faith has any place in its distribution, it is to be found among the phenomena of knowledge" (*Philosophy of the Infinite*, where are many fine remarks on faith and knowledge, 2d ed. p. 136). But the truth is, it is not clear in which of the three divisions Kant or Hamilton would put faith. The difficulty of finding a place for faith, and we may add, for conscience and imagination, shows that their three-fold division of the mental attributes is defective; the same may be said of that of Professor Bain (*Senses and Intellect*, pp. 2–10, and App. I.). But passing over this, it would almost look as if Hamilton would have to put faith into the compartment of feeling. "Knowledge and belief differ not only in degree but in kind. Knowledge is certainly founded on intuition. Belief is certainly founded upon feeling" (*Logic*, Lect. 37). We cannot conceive a more radically defective account than this of faith, to found it upon feeling, which he explains as consisting in pleasure and pain. The disciples of Hamilton have not thrown any light on the subject. Faith is explained by Professor Fraser (*Essays*, p. 32) as "the belief of principles which in themselves are incognizable or irreconcilable by the understanding, and yet unquestionable." But surely we have faith in God, who yet is not incognizable. Professor Veitch says (Art. Hamilton in *Dict. Univ. Biog.*): "The absolute or infinite is cast beyond the sphere of thought and science; it is still, however, allowed by Hamilton to remain in some sense in conscious-

ness, for it is grasped by faith, and faith is a conscious act. The question, accordingly, at once meets us : In what sense and how far can there be an object within consciousness which is not properly within thought or knowledge ? In other words, how far is our faith in the infinite intelligent and intelligible ? This point demands farther and more detailed treatment than it has met with either at the hands of Sir W. Hamilton himself, or any one who has sought to carry out his principles." For years past I have been calling on the disciples of Hamilton to explain what they mean by faith. Till this point is cleared up, there is an unfilled-up chasm in the whole psychology and philosophy of the school.

CHAPTER II.

SPACE AND TIME.

I.

Of Space in the concrete we have an immediate knowledge; that is, by the senses, certainly by some of them, such as the touch and the sight; most probably by all of them we know bodies, say our own bodily organism, as extended, that is, as occupying space. By abstraction we can fix our attention on the space as distinct from associated qualities, and by inward reflection we can gather what are the convictions attached. These convictions pass beyond knowledge proper, and become beliefs, that is, convictions in regard to something which we do not immediately know, nay, which we may never be able to know.

With Time, also, we have an immediate acquaintance. In sense-perception and self-consciousness we know a particular object or mental state as now present. Our consciousness is continuous; speedily does immediate consciousness slide into memory; the present becomes past, and is remembered as past. The child's organism is now in a state of pain; immediately after the pain is gone, but the pain of the past is remembered, and remembered as being past. Already, then, there is the idea of time always in the concrete, — we remember something as having been under our consciousness in the past. By abstraction we can then think of the time as different from the event remembered in time; and by introspection we can ascertain the nature of the attached convictions. Many of these are of the nature of faiths

going far beyond what is, or ever can be, immediately known.

Space and time mingle with all our perceptions. Yet after all we can say little about them; all that we can do as metaphysicians is to analyze and express our original convictions. It belongs to the mathematician to evolve deductively what is involved in certain of them. In unfolding the necessary convictions we may make the following affirmations: —

II.

Time and Space have a reality independent of the Percipient Mind, and out of the percipient mind. The intelligence does not create them, it discovers them, and it discovers them as having an existence independent of the mind contemplating them, as having this existence whether the mind contemplates them or no, and an existence out of and beyond the mind as it thinks of them. He who denies this, is in the very act setting aside one of the clearest of native principles, and has left himself no standpoint from which to repel any proposal, suggested to himself or offered by another, to set aside any other conviction, or all other convictions. If some one affirm that space has no objective existence, he leaves it competent for any other coming after him to maintain that the objects perceived in space have no reality. He who allows that time may have no reality except in the contemplative mind, will find himself greatly troubled to answer the sceptic when he insists that the events in time are quite as unreal as the time is in which they are perceived as having occurred. There is only one sure and consistent mode of avoiding these troublesome and dangerous consequences, and that is by standing up for the veracity of all our fundamental per-

ceptions, and, among others, of our convictions regarding the reality of space and time.

According to Kant, space and time are the forms given by the mind to the phenomena which are presented through the senses, and are not to be considered as having anything more than a subjective existence. It is one of the most fatal heresies — that is, dogmas opposed to the revelations of consciousness — ever introduced into philosophy, and it lies at the basis of all the aberrations in the school of speculation which followed. For those who were taught that the mind could create the space and time, soon learned to suppose that the mind could also create the objects and events cognized as in space and time, till the whole external universe became ideal, and all reality was supposed to lie in a series of connected mental forms. He who would arrest the stream must seek to stop it at the place whence it flowed out; otherwise all his efforts will be ineffectual.

III.

Space and Time are Continuous, that is, they extend out, flow on, without break, separation, or interruption. In this respect they are different from matter or body, which may be broken into parts, and the parts separated from each other. But there can be no gaps in space, no cessation in time. There are, and can be, no variations in the one or other. We do speak of times changing, but we mean the circumstances in time. We say *tempora mutantur*, but the changes are in the events, which *mutantur in illis*.

This is one of several circumstances which has made space and time to be classed together. Yet while they may be grouped under one head, they are not identical, and they have their points of difference. In particular,

space has three dimensions, — length, breadth, and depth; that is, we may contemplate it as extending along any given line, as spreading out in a surface, or as going out in all directions. Time again has only succession, present, priority and posteriority. We often apply to time language derived from space, and we represent time as a line, and speak of it as being only in one direction. But it is to be remembered that such language is used metaphorically, and has no literal meaning as applied to time. Still it points to a truth, and specifies a difference between space and time. But in regard to their extension or flow, both are continuous, and spread out or run on without a possible division.

But it will be urged, that the question is often discussed as to whether space and time are infinitely divisible, and that certain mathematicians maintain that they have demonstrated the infinite divisibility of space. In looking at this question, it is desirable first of all to have it settled in what sense extension is capable of division. We cannot divide space in the sense in which we divide matter. In dividing body we separate one part of it from another, so as to leave a space between. We can thus divide an apple, and keep one part of it in our hand, and lay the other on the table. But we cannot thus separate or isolate space apart from space. In the sense of separation, we cannot with propriety speak of the infinite divisibility of space, for it is not divisible at all, either finitely or infinitely. The same remark holds good of time. The mind declares that the separation of space from space, or of time from time, is impossible in the nature of things.[1]

There may, however, be relations discovered both in

[1] This view is developed with great acuteness in Gillespie's *Necessary Existence of Deity* (Exam. Antith. Refut. Part III.).

space and time. We can conceive of less or more of extension, and of proportions between the less and the more; the one may be twice or ten times as much as the other. All this we are allowed, nay necessitated, to think. The science which treats of quantity, that is, mathematics, has specially to do with these relations. There may be little or no impropriety in calling these proportions parts, provided we do not misunderstand the language we employ, or understand it as implying that between two spaces there can be an interval in which there is no space. What is meant by the infinite division of space seems to be, that, fixing our thoughts on any given section or proportion of space, say the thousandth part of an inch, we are at liberty to conceive of the half of it, and again of the half of the quotient, and so on indefinitely as far as may serve our purpose or we may choose. Some of these subjects will be resumed when we come to consider those primitive judgments which relate to quantity.

But before leaving the subject immediately before us, it is of importance to have it noticed that our convictions say nothing whatever on (what is a very different matter from the divisibility of space, though the two have often been confounded) the infinite divisibility of matter. This latter is a question which can be settled by nothing but experience; experience at this present stage of science says nothing whatever on the subject, and I suspect will never be able to settle it on one side or other. There might be limits to man's capacity of dividing body which would not be limits to other beings, and whether there could be any limits to a Being of Infinite Power is a question which it transcends our faculties to answer, and which therefore we should not attempt to answer.

IV.

Space and Time have and can have no Limits. Nor is this a mere negative proposition, as some have declared it to be; it is a positive affirmation that to whatever point we go, in reality or in imagination, there must be a space and time beyond. Nor is it, as it has been represented, an impotency of mind. It is not a mere incapacity to conceive that when we go a certain length back or forward in time, or out into space, there time and space should cease. It is a conviction of a positive kind, that beyond these points, or beyond any other space conceivable, there must still be time and space. This, as will be shown more fully forthwith, is a truth self-evident, necessary, universal. If we were carried out to the utmost point to which the furthest-seeing telescope can reach, or beyond this as far as imagination can range, we should confidently stretch forth our hand into an outer region, believing that there must be space into which it might enter, and that if it were hindered it must be by body occupying space.

There is more than this embraced in our native conviction. We are constrained to believe as to the space and time which we know in part, and which we are constrained to regard as beyond our power of imagination, that they are such that no addition could be made to them. This is a further and a most important element in our conviction. We intuitively know space and time: with this we start. Looking to the space and time which we thus know, we are constrained to regard them as ever going beyond our image of them. But we do more: we are convinced that they are such in their very nature that no further space and time could be added to them. Join these elements together, and, so far as I can discover

by reflection on the operations of my own mind, we have the conception and belief which the mind of man is able to attain as to the infinity of space and time.

V.

But we are already in the heart of the subject of the Infinite, to which a separate chapter must be allotted. In this chapter we have yet to take up difficulties which press on us when we contemplate space and time. We may have occasion to show, at a later part of this work, that our very cognitions often land us in mysteries, that is, in propositions to which we must assent, but which have bearings which we cannot comprehend. To a still greater extent is it of the nature of faith ever to be going out into darkness. For the truths believed in may not be fully comprehended in themselves, and their relations may be altogether beyond our ken. It should be frankly acknowledged that we are landed in mysteries which the human intellect cannot explicate, whenever we inquire beyond the narrow limits within which our convictions restrain us. But it is of all courses the most foolish and suicidal to urge the difficulties connected with space and time as a reason for setting aside our intuitive convictions respecting them, say in regard to their reality. Doubtless we are landed in some perplexities by allowing that they are real, but we are landed in more hopeless difficulties and in far more serious consequences when we deny their reality; and there is this important difference between the cases, that in the one the difficulties arise from the nature of the subject, whereas in the other they are created by our own unwarranted affirmations and speculations.

But what *are* space and time is the question that will be pressed on us. To this I reply, that it is true of

them, as of the objects of every other intuitive conviction, that we cannot explain them except by referring to our original perception. All that has been attempted in this chapter is to bring out clearly what is involved in the intuition.

But it will be asked, Are they substances, are they modes, or are they relations? To this I reply, that these questions relate not so much to the nature of space or time as the classification of them, and that they are not to be classified with substances, modes, or relations. We cannot call them substances, for we do not know that they have power or action. Nor can we call them modes, for we have no intuitive knowledge of any substance in which they inhere. And they are certainly more than relations of one thing to another, for we know no two or more things which by their relation could yield space and time. They are not, then, to be arranged with such cognitions as these. They seem indeed to be entitled to be put in a class by themselves, and resemble substances, modes, relations, only in that they are existences, entities, realities.

Certain mystical divines and philosophers are accustomed to speak of space and time as having no reality to the Divine mind. It follows, I think, that if they have no reality to the God who knows all truth, they can, properly speaking, have no reality at all. If our convictions testify (as I have endeavored to show) that they have a reality, it follows, I think, that they have a reality to the Divine mind. Again, there are some who talk of an Eternal Now: —

> "Nothing is there to come, and nothing past,
> But an Eternal Now does ever last."

These lines of Cowley embody, as definitely as can be done, a view which was countenanced by certain ex-

pressions of Augustine, and systematized in the scholastic ages, and which has ever since been floating in the statements of divines in speaking of God and Eternity and Time. But the language has either no meaning, or, if it has, it lands us in hopeless contradictions.

It would have been very different if divines had contented themselves with stating that they do not know how space and time stand related to the Divine mind. We are here in the midst of a mystery, which we have no faculties to clear up. We know that space and time exist; we know on sufficient evidence that God exists: but we have no means of knowing how space and time stand related to God. There may be truth in the statement of Joannes Damascenus, that "God is his own place, filling all things, and being over all things, and himself containing all things," but how much truth cannot be determined by the limited mind of man.[1] The view taken by Sir Isaac Newton — "Deus durat semper et adest ubique, et, existendo semper et ubique, durationem et spatium constituit" [2] — is certainly a grand one, but I doubt much whether human intelligence is entitled to affirm dictatorially that it is as true as it is sublime.

It is by placing the subject beyond the human faculties that we are able to meet an objection urged with great logical power by Kant, and usually thought to be insuperable.[3] If space and time be real and infinite, then we have two infinites; and if God be also infinite, our difficulties are increased. For it is absurd, if not contradictory, to suppose that there can be two infinite things, — that God can be infinite while space and time are also

[1] Ὁ θεὸς ἑαυτοῦ τόπος ἐστι, τὰ πάντα πληρῶν, καὶ ὑπερ τὰ πάντα ὤν, καὶ αὐτος συνέχων τὶ πάντα (*De Orthod. Fid.* I. 13).

[2] Scholium at close of *Phil. Nat. Prin. Math.*

[3] *Kritik d. r. Vern.* Die transcen. Æsthet.

infinites. Now to this I might, without the possibility of a positive refutation, urge, *firstly*, that there may, for aught we know, be nothing inconsistent in supposing that there are two things, as space and time, the one unbounded and the other without beginning or end, and that there can even be nothing contradictory in supposing that space and time on the one hand, and God on the other, may have infinite attributes. They could be held as contradictory only in the supposition that the existence of unbounded space and unending time were, in the nature of things, inconsistent one with another or with the existence of an infinite God; which it may safely be said can never be proven. As to how they could subsist together, is a question we are not obliged to answer, for we must believe many separate truths, each on its evidence, without being able to trace a connection, or so much as to say that there is a *how* between them. But I plant myself on far firmer ground when I maintain, *secondly*, that while I believe that space and time are infinite, and that God is infinite, I am not necessarily obliged to hold that the infinity of space and time is independent of the infinity of God. Who will venture to affirm that the statement we have quoted from the great Newton may not be true? Who will venture to affirm that space and time, being dependent on God, may not stand in a relation to God which is altogether indefinable and utterly inconceivable by us? True, we are constrained to believe that space and time have an existence independent of us, but we are not compelled to believe that they have an existence independent of everything else, and least of all independent of God — we must keep ourselves from falling into the heathen sin of deifying Chronos. In such a subject, where we have no light from intuition or from experience to guide us, true wis-

dom shows itself in refusing to assert or dogmatize, or even to speculate; and when it has observed this rule for itself, it is the better able to rebuke doubt and scepticism, when they would bring forth their difficulties from regions which are beyond the reach of human knowledge.

Lucretius (i. 460) maintained that time has no existence of itself: "Tempus item per se non est." Very possibly space and time may have no independent existence. Very possibly there may be no such thing as unoccupied space, or time without an event. Most probably space and time may not be independent of God. Still they exist, and exist independent of our contemplation of them.

Dr. Thomas Brown, in an article on Villers, "Philosophie de Kant," in No. II. (1803) of the *Edinburgh Review*, dwells on this. "The truth of space and of the world being to our reasoning scepticism the same, we cannot deny space and admit the reality of sensible objects." D. Stewart, after affirming that the idea of space "is manifestly accompanied with an irresistible conviction that space is necessarily existent, and that its annihilation is impossible," adds, "to call this proposition in question is to open a door to universal scepticism" (*Disser.* p. 597). In our day we find the greatest opponent of the Dialectic of Hegel who has appeared taking the same view. "Hiernach sind Raum und Zeit etwas Subjectives und zwar nach Kant etwas nur Subjectives. Wenn dies folgt, so verflüchtet sich damit die ganze Weltansicht in Erscheinung, und Erscheinung ist vom Scheine nicht weit entfernt. Wenn Raum und Zeit nur und ausschliessend Subjectives sind, so drängt sich allenthalben diese Zuthat ein. Wie die Luftschicht zwischen dem Auge und dem Gegenstande, wirft sie auf alles eine fremde Trübung; denn alles erscheint in Raum und Zeit, die nur aus uns geboren sind. Wir erkennen nun nichts an sich; denn die Verstandesbegriffe haben (nach Kant) nur Anwendung durch diese Formen der Anschauung, und die Vernunftbegriffe suchen wieder nur eine Einheit für die Verstandeserkenntniss. Wie wollen wir uns von dem Zauberkreise lösen, da er vielmehr unser eigenstes Wesen ist?" (Trendelenburg, *Logische Untersuchungen*, b. i. v.) Sir W. Hamilton agrees with Kant as to the à priori idea of space, and to avoid the difficulties calls in an à posteriori notion: "We have a twofold cognition of space: (*a*) an à priori or *native* imagination of it in general, as a necessary condition of the possibility of thought; and (*b*) under

that an a posteriori or *adventitious* percept of it, in particular as contingently apprehended in this or that complexus of sensations" (Reid's *Coll. Writ.* p. 882). "In this I venture a step beyond Reid and Stewart, no less than beyond Kant" (p. 126). A simpler and a more natural account of the relations between a priori and a posteriori would bring these two notions to a unity.

It has been asked why the mind gives three dimensions to space and only one to time. Those who regard space and time as the creation of the mind may amuse themselves with answering this question. There is profound sense in the following remarks of Sir J. Herschel, in his "Review of Whewell" (*Essays*, p. 202): "The reason, we conceive, why we apprehend things without us, is that they *are* without us. We take it for granted that they exist in space because they *do* so exist, and because such their existence is a matter of direct perception, which can neither be explained in words nor contravened in imagination; because, in short, space is a *reality*." "That which has parts, proportions, and susceptibilities of exact measurement, must be a 'thing.'"

Leibnitz held space and time to be relations given to objects by the mind. "Je tenois l'Espace pour quelque de PUREMENT RELATIF, comme le Temps; pour un ORDRE DE COEXISTENCE, comme le Temps est un ORDRE DE SUCCESSIONS" (*Op.* p. 752. See, also, pp. 461, 756, 769). He speaks of space and time as being "rapports," and as "idéal." Leibnitz thus prepared the way for the more systematic doctrine of Kant. Samuel Clarke argues powerfully that space and time are realities, but makes them attributes, properties, or modes, of an eternal substance (see his *Letters to Leibnitz*). D. Stewart, with his usual wisdom, says that "space is neither *substance*, nor an *accident*, nor a *relation*;" adding, "But it does not follow from this that it is nothing objective" (*Dissert.* p. 596).

The difficulty has been started, Are space and time made up of parts? and if so, are infinite time and space made up of parts? To this I reply, first and decisively, that we cannot conceive them as made up of partitions, or separable parts, as an apple or an orange is, or as the earth is, or the sun is. But then, secondly, we can conceive proportions in space and time; and if we take any of these proportional sections and divide it into two, thought will compel us to say that the two must make up the whole. In this sense the parts make up the whole, that is, the sub-sections make up the section. If the question be extended beyond this, and it be asked, Is infinite space made up of parts? I answer that, as we can have no adequate

notion of infinite space, so we cannot be expected to answer all the questions which may be put regarding it. It is certain that neither infinite space nor finite space is made up of separable parts. We can speak intelligibly of proportions in finite space, and determine their relations to each other and the whole. I tremble to speak of the proportions of infinite space, lest I be using language which has or can have no proper meaning, and the signification attached to which by me or others might be altogether inapplicable to such a subject. Still there are propositions which we might intelligibly use. It is self-evident that any proportion of space must be less than infinite space, and if infinite space can be conceived as having proportions, and we could conceive all these proportions, then these proportions would be equal to the whole. But as we cannot adequately conceive the whole, so neither can we conceive of the proportions of the whole. We are in a region dark and pathless and directionless, and we may as well draw back at once, for nothing is to be gained by advancing.

"Non igitur respondere curabimus iis, qui quærunt an si daretur linea infinita, ejus media pars esset etiam infinita; vel an numeras infinitus sit par anve impar; et talia; quia de iis nulli videntur debere cogitare nisi qui mentem suam infinitam esse arbitrantur" (Descartes, *Prin.* p. i. 26).

CHAPTER III.

THE INFINITE.

THE subject now opening before us is a profound one. In meditating upon it we feel as we do when we look into the blue expanse of heaven, or when from a solitary rock we gaze on a shoreless ocean spread all around us. The topic has exercised the profoundest minds since thought began the attempt to solve the problems of the universe, and has been specially discussed since Christian theology made men familiar with the idea of an eternal and omnipresent God. All that I profess to do is to endeavor to discover by induction what is the mind's idea and conviction in regard to infinity. A priori cogitation is not to be tolerated in its proffered determinations of what our idea of Infinity should be or must be. Logical dissection and division, instead of aiding, may only lead us into hopeless difficulties. Lofty generalizations embracing all other objects may have no application to an object which from its very nature must be *sui generis*.

I.

TWO NEGATIVE PROPOSITIONS may be established.

The mind can form no adequate apprehension of the infinite, in the sense of image or phantasm. In saying so, I do not mean merely that we cannot construct a mental picture of the infinite as an attribute. Of no quality can the mind fashion a picture; it cannot have a mental representation of transparency, apart from a transparent substance, and just as little can it picture

to itself infinity apart from an infinite duration, or infinite extension, or an infinite God. But it is not in this sense simply that the mind cannot apprehend the infinite: it cannot have before it an apprehension of an infinite object, say of an infinite space, or an infinite God. For to image a thing in our mind is to give it an extent and a boundary. When we would imagine unlimited space, we swell out an immense volume, but it has after all a boundary, commonly a spherical one. When we would picture unlimited time, we let out an immense line behind and before, but the rope is after all cut at both ends. When we would represent to ourselves almighty power, we call up some given act of God, say creating or annihilating the universe; but after all, the work has a measure, and may be finished. In the sense of image, then, the mind cannot have any proper apprehension of infinity as an attribute, or of an infinite object.

The mind can form no adequate logical notion of an infinite object. For apprehension may be considered as an act of the understanding as well as a mere act of the fantasy. We can conceive, we can think about much, which we cannot image. We can meditate and reason about such things as law, government, duty, religion, while yet we can form no mental picture of them. The grand question in this discussion is, Can we form an intellectual notion of an infinite object, say of an infinite God? And I feel constrained to admit and maintain that human intelligence can form no proper or adequate conception of an infinite existence. By what process can it be supposed to construct such a conception? Certainly not by abstraction, for abstraction separates, takes away, diminishes. It is just as certain that it cannot compass this end by generalization, for generalization

merely groups objects by attributes known, and unless we have infinity first in the individual we cannot have it in the general. Nor can we reach it by addition, multiplication, composition; these will give the enlarged, but not the unlimited: a distance of a quintillion of quintillions of years or ages has as distinct a termination as an ell or an inch. Nor can the understanding attain it by a process of ratiocination, for, unless the infinite were in the premise, no canon of reasoning would justify its having a place in the conclusion. If the intelligence does not find the infinite in the perception with which it sets out, it never could fashion it by cutting or carving, by construction or supraposition.

So much may be allowed to those British philosophers who have been at pains to show that we can form no conception of the infinite, or that the notion is at best negative. But, on the other hand, I am prepared to maintain that the mind has some positive apprehension and belief in regard to infinity; otherwise, why do meditative minds find the thought so often pressing itself upon them? why has it such a place in our faith in God? why is it ever coming up in theology? And if we have an idea and conviction, it is surely possible to determine what they are by a careful observation of what passes through the mind when it would muse on the eternal, the omnipresent, the perfect.

II.

Two Positive Propositions may be laid down.

(1.) *The mind apprehends and believes that there is and must be something beyond its widest image and concept.* Let us follow the mind in its attempt to grasp infinity. I have allowed that we cannot have an idea of infinite space and time, in the sense of imaging, pic-

turing, or representing them. Stretch itself as it may, the imaging power of the mind can never go beyond an expansion with a boundary, commonly a globe or sphere of which self is the centre, and duration stretching along like a line, but with a beginning and an end. In respect, then, of the mental picture or representation, the apprehension is merely of the very large or the very long, but still of the finite, of what might be called the indefinite, but not the infinite. But any account of our conviction as to infinity which goes no further leaves out the main, the peculiar element. The sailor is not led by any native instinct to believe that the ocean has no bottom, simply because in letting down the sounding-line he has not reached the ground. When the astronomer has gauged space as far as his telescope can penetrate, he finds that there are still stars and clusters of stars, but he is not necessitated to believe that there must be star after star on and forever. The geologist in going down from layer to layer still finds signs of the existence of a previous earth, but he is not obliged to conclude that there must have been stratum before stratum from all eternity. But man is constrained to believe that whatever be the point of space or time to which his eye or his thoughts may reach, there must be a space and time beyond. Whence this belief of the mind, on space and time being presented to it? Whence this necessity of thought or belief? This is the very phenomenon to be accounted for; and yet the British school of metaphysicians can scarcely be said to have contemplated it seriously or steadfastly, with the view of unfolding the depth of meaning embraced in it. It implies that to whatever point of space or time we might go in our persons or in our fancy, there would still be a space and a time beyond. I can easily, in imagination, go out as

far as the rim of the earth, or as the moon, or as the sun, or as the nearest star, or as the farthest star seen by the eye, or as the remotest star discovered as a speck in a nebulous cloud of light by the telescope ; but when there, I must believe that space still goes on, and that if I were carried ten thousand million times farther there would still be space. I can represent to myself the instant of time when man was created, and beyond this the time when the lion or the worm, or the palm or the lichen, were created, or when the earth or the angels were created; but though this period were multiplied by itself millions of billions of trillions of times, I not only cannot believe that duration did then begin, I am constrained to believe that it did not and could not then commence. This intuitive belief, accompanied as it is with a stringent necessity of feeling, is the very peculiarity of the mind's conviction in regard to infinity, as it is one of the grandest characteristics of human intelligence. It should be added that it is a power which ever impresses man with his powerlessness.

This conviction has the characters and can bear the tests of intuition. It is self-evident. Indeed, if it did not shine in its own light, it could never be seen in any other which we might hold up to it. It can stand the test of necessity. It is necessary, we must believe it when our intelligence is directed towards it. We cannot be made to believe otherwise, to believe that there is a limit to immensity and duration. It is, when properly understood, universal. The image, it is true, of space or time, formed by the boy or savage, may be very contracted. The widest space of which he has had any experience may be the glorious dome spread over his head in the sky, and his imagination may be able to go very little beyond the visible heavens or the distant hills

which bound his view; still he is sure that beyond there must be something, an "outer infinite," and perhaps he will be eager to know what is beyond that horizon. His idea of time, as a positive picture, may extend no further than the date of the oldest story which his grandfather has told him; but he is sure that at that point duration did not begin, and he may be interested to know what happened before.

> "Heaven lies about us in our infancy.
> . . . . . .
> Hence in a season of calm weather,
> Though inland far we be,
> Our souls have sight of that immortal sea
> Which brought us hither,
> Can in a moment travel thither,
> And see the children sport upon the shore,
> And hear the mighty waters rolling evermore."

I suspect that this is rather a poetical expression of what passes through the mind of infants; but it is true and correct so far as it indicates that there is an imaginative tendency which from very early life goes out from the actual to the ideal. "Let them," says John Howe in his *Living Temple*, "therefore reject it if they can. They will feel it reimposing itself upon them whether they will or no, and sticking as close to their minds as their very thinking power itself." But this is not all that is comprised in the conviction.

(2.) *We apprehend and are constrained to believe in regard to the objects which we look upon as infinite that they are incapable of augmentation.* Here, as in every apprehension which we have of infinity, the imaging power of the mind fails and must fail: still we have an image and an intellectual conception; say, an image with a notion of extension, or duration, or Deity. Or

we represent to ourselves the Divine Being, with certain attributes, — say, as wise or as good, — and our belief as to him and these attributes is, that he cannot be wiser or better. This aspect may be appropriately designated as the Perfect. This is the conviction of the Perfect, of which many profound philosophers make so much, but not more, as I think, than they are entitled to do; though they have not, as it appears to me, always given the correct account of the nature and of the genesis of the notion. We think of God as having all his attributes such that no addition could be made to them; and we call such attributes his perfections. In regard, indeed, to the moral attributes of Deity, it is this significant word Perfect, rather than infinite, which expresses the conviction which we are led to entertain in regard, for example, to the wisdom, or benevolence, or righteousness of God.

This, too, seems a native conviction of the mind. It needs, indeed, a certain matter provided for it, and to which it may adhere. In a positive state it springs up late, and grows slowly in all minds to which it is not externally given by education, out of the Bible or otherwise. Still it is there in the mind as a tendency, placing before every man some sort of "Idea" in the Platonic sense; a model, or *beau idéal*, which he is ever prompted to strive after, while he is made to feel that he has not reached it. It is this impulse, I apprehend, which makes even the heathens speak of their gods, or at least their supreme god, as ineffably good and immortal: the actual conceptions of his excellence and duration may be extremely inadequate, still they will not allow that there could be any increase made to his attributes; and, under fostering circumstances, the conviction will come out in a more decided form. When the object is brought under

our notice, we see that it is perfect, that it must be perfect, and that it cannot be otherwise. The faith is universal, but the conception takes the form which may be given it by the education or the intellectual strength and growth of the individual.

But it will be urged that these two aspects or sides of infinity are inconsistent. According to the one, infinity is something to which something can be ever added; whereas, according to the other, it is something to which nothing can be added. But in this, as in every other case of apparent or alleged contradiction among our original perceptions, the inconsistency vanishes on a careful inspection of the precise nature of the convictions. The infinite is something beyond *our* image or notion; but it is not something beyond the infinite itself. It is something which admits of no increase, but that something is not the imperfect notion we form, and which we know to be imperfect. The two are not contradictory, but the one is supplementary to the other. They cannot, however, be represented as the complement the one of the other; for, while they make up such an apprehension as the finite mind of man can form, they do not make up the infinite itself, which is confessedly far beyond. The first of these views tends to humble us, as showing how far our creature impotency is below Creator Power. The other has rather a tendency to elevate us, by showing a perfect exemplar, which is indeed far above us, but to which we may ever look up. The Perfect shines above us like the sun in the heavens, distant and unapproachable, dazzling and blinding us as we would gaze on it, but still our eye ever tends to turn up towards it, and we feel that it is a blessed thing that there is such a light, and that we are permitted to walk in it and rejoice in it.

III.

From this account we see that there is both an idea and a belief in our apprehension of the infinite. I have admitted that the image and the notion are not adequate. Still there is always an idea. Round this, as a body, the belief gathers, as the atmosphere does round the earth. First, there must always be an image and a notion of an existing thing, say space or time; or, as far more conceivable, a living and an intelligent God. The mind labors to heighten, to deepen, to widen, this idea on every side. It is after all within limits; but it can inquire what is beyond. It can do more: it can look out on what is beyond. It can do yet more : it knows that there is something beyond, and perceives somewhat of it. It is sure, for example, that, as far as it has gone in space, there is a space beyond; far as it has gone in time, there is a time beyond; much as it has conceived of God, there is, after all, more of the Divine perfections. There is thus a conception of an object; there is thus, too, a conception of this same object being beyond, and still further. The belief attaches to this conception, and declares that this thing conceived, this thing conceived as still beyond, is a reality, and that it is such that it cannot be increased. My readers must consult their own consciousness as to whether the account now given of the nature and genesis of our conviction is the correct one.

This notion, with its adhering belief, is a mental phenomenon which we have a word to express. We can subject it to logical processes; it comes in, like all our perceptions, in the concrete; it is something, say space, time, or Deity, we apprehend as infinite; but we can abstract the infinite from the object regarded as infinite, and form the abstract idea of infinity. We can gener-

alize it, and use it as a predicate: thus we can talk of space and time and God as being infinite. We can utter judgments regarding it, as that the infinite God is in every given place; there is no place of which we may not say, "Surely the Lord is in this place." We can even reason about it; thus we can infer that this puny effort of man, set against the recorded will of God, shall most certainly be frustrated by his infinite power. Keeping within the limits prescribed by the nature of the convictions, man can speak about the infinite and be intelligible; he can legitimately employ it in argument, and he can muse upon it, and find it to be among the most ennobling and precious of themes.

And yet it is true all the while that the notion is engulfed in mystery. It is of all things the most preposterous in certain speculators to set out with the idea of the infinite without a previous induction of its nature, and thence proceed, consecutively or deductively, to draw out a body of philosophy or theology. Such men have lost themselves in attempting to voyage an "unreal, vast, unbounded deep of horrible confusion;" and yet they would seek to pilot others, only to conduct them into darker gloom and more inextricable straits, and, in the end, bottomless abysses. The account we have given of the conception and belief, shows how narrow the limits within which man can make intelligible assertions; how strait the road in which he must walk, if he would not lose himself in wilderness and in morass. He who passes these bounds is talking without a meaning; he who would start with the notion of the absolute, and thence construct a system embracing God, the world, and man, will without fail land himself in helpless and hopeless contradictions, — the necessary consequent and the appropriate punishment of his folly and presumption.

IV.

The question is here started, What is it that we are to regard as infinite? And here it is of importance to remind the reader that, as a native law or regulative law in the mind, our intuition as to the infinite is a tendency or aptitude, and not perception or knowledge. In this respect it is like our other inborn convictions. Man is endowed by nature with senses, but the senses do not perceive till an object is presented. On falling in with a phenomenon we look for a cause, but (as we shall see) it is by experience, and not by intuition, that we know what the cause is. We all have a conscience which prepares us for discerning between good and evil, but it is not till a voluntary action is presented that we pronounce a decision. So with our conviction as to infinity: the innate law is a tendency to look out beyond the actual, and to seek for the perfect. In order to the exercise and manifestation of the disposition, there must be an object made known and conceived, and on which the conviction may fasten. What the object is must be determined by an inductive observation of the exercises.

(1.) We look on infinity as an attribute of an object. The infinite is not to be viewed as having an independent being; it is not to be regarded as a substance or a separate entity: it is simply the quality of a thing, very possibly the attribute of the attribute of an object. Thus we apply the phrase to the Divine Being to denote a perfection of his nature; we apply it also to all his perfections, such as his wisdom and goodness, which we describe as infinite. It is the more necessary to insist on this view, from the circumstance that metaphysicians are very much tempted to give an independent being to abstractions; and, in particular, some of them write

about the infinite in such a way as to make their readers look upon it as a separate existence. I stand up for the reality of infinity, but I claim for it a reality simply as an attribute of some existing object. Let us endeavor to ascertain what the object is.

(2.) We look on space and time as infinite, and believe in the possibility of infinite being or substance. We cannot be made to believe that at any given point space should cease, or that at any given instant time should begin, or should come to an end. But let us consider how much is implied in this. Place and time are looked upon by us mainly as conditions of the possibility of the existence of other objects. Wherever there is space there may be active existence, and in all time there may be events happening. The infinity of space and time thus implies the possibility of infinite being to dwell in them. There is ever felt to be an emptiness about pure space and time. We know not in fact of a space or time without a substantial existence in them. I do indeed maintain, on the ground of ineradicable conviction, that we must believe them to be independent of ourselves contemplating them, or of material objects placed in them. But the mind has a difficulty in conceiving of them as altogether separate and independent entities. It is from this cause, I am convinced, that so many philosophers represent them as mere relations of things rather than things, or as forms given to objects by the mind, or as mere conditions of existence. These are very incorrect representations; still the very fact that they have been advanced is an evidence of the difficulty which the mind experiences in grasping the realities of empty space and time, which do look as if they were voids to be filled up. Independent of us, they scarcely look as if they were independent of a substantial existence. I am not pre-

pared to affirm with S. Clarke that they are modes of substance; but I have little to say against another statement of the same author, that "they are immediate and necessary consequences of the existence of God, and that without them his Eternity and Ubiquity would be taken away;" or the statement of Newton, that "God constitutes time and space." The mind feels as if there were something wanting, till it learns of ONE to occupy the vacuum; but it is met and gratified in every one of its intellectual and moral intuitions when it is brought to know Him who inhabiteth eternity and immensity, and filleth them with living and life-giving fulness.

(3.) *Our intuition is satisfied only by the contemplation of an infinite God.* I am not convinced that our intuitive convictions as to infinity, of themselves, and apart from auxiliary considerations, guarantee the existence of infinite substance. I am sure they give no sanction to the doctrine held by so many of the ancient Greek philosophers, that material substance is eternal; we can easily conceive and believe matter to have been brought into existence at some point in time by a power adequate to produce it. It does not appear to me that we are constrained by our convictions on this special subject, taken apart from all other evidence, to believe in the existence of an eternal or omnipresent God. Herein I have always thought that the argument a priori or intuitive in behalf of the Divine existence fails. There is a link wanting which shows that the proof is not apodictic or demonstrative; that it is not founded on truths which are self-evident throughout, as is, for example, the proposition that the opposite angles made by the intersection of two straight lines are equal. We have and can have no such demonstrative evidence of other truths to which the mind cleaves most resolutely; as, for example, that

we ever had a sister, or brother, or friend, or that we ever sat under the shelter of a father's wisdom, or were refreshed by the dews of a mother's tenderness. There is need of other considerations, and particularly of an experiental element, in the form of certain obvious facts, to prove the existence of a being dwelling in infinite time and space, and possessed of infinite power and goodness. I may have occasion to show that when the patent facts and native convictions are brought together, the certainty is of the very highest order short of demonstration, which it falls beneath only so far as not absolutely to preclude the possibility of doubt when the fool is determined to say in his heart, "There is no God." It would be premature to bring forward in detailed array these combined considerations at this stage of our inquiries, and to show how the order and adaptation in nature are evidence of a designing and planning mind; how the evident effects in nature evoke the intuition which demands that there be a cause; how our convictions of moral obligation imply a law, the embodiment of the nature of a lawgiver; and how all these unite to establish the existence of a living being, intelligent and holy. When this being is made known to us by these or by other means, our conviction as to infinity fastens on it as its appropriate object, and we believe that He who made all things, and who is thus powerful, thus benevolent, thus holy, is and must be the Infinite, the Perfect.

The nature of man's conviction in regard to infinity is fitted to impress us, at one and the same time, with the strength and the weakness of human intelligence, which is powerful in that it can apprehend so much, but feeble in that it can apprehend no more. The idea entertained is felt to be inadequate, but this is one of its excellences,

that it is felt to be inadequate; for it would indeed be lamentably deficient if it did not acknowledge of itself that it falls infinitely beneath the magnitude of the object. The mind is led by an inward tendency to stretch its ideas wider and wider, but is made to know at the most extreme point which it has reached that there is something further on. It is thus impelled to be ever striving after something which it has not yet reached, and to look beyond the limits of time into eternity beyond, in which there is the prospect of a noble occupation in beholding, through ages which can come to no end and a space which has no bounds, the manifestations of a might and an excellence of which we can never know all, but of which we may ever know more. It is an idea which would ever allure us up towards a God of infinite perfection, and yet make us feel, more and more impressively the higher we ascend, that we are, after all, infinitely beneath him. Man's capacity to form such an idea is a proof that he was formed by an infinite God, and in the image of an infinite God; his incapacity, in spite of all his efforts to form a higher idea, is fitted to show us how wide the space and how impassable the gulf which separates man as finite from God the infinite.

They are in error who conclude that they cannot know an infinite God, but they are equally in error who suppose that they can reach a perfect knowledge of him. There is a sense in which he may be described as the unknown God, for no human intellect can come to know all the attributes of God, or even know all about any one of his perfections; but there is a sense in which he is emphatically the known God, inasmuch as he has been pleased to manifest and reveal himself, and every human being is required to attain a clear and positive, though at the same time a necessarily inadequate, knowl-

edge of him. It is true, on the one hand, that the invisible things of God from the creation of the world are clearly seen, being understood from the things which are made, even his eternal power and Godhead; but it is equally true, on the other, that we cannot by searching find out God, that we cannot find out the Almighty unto perfection. The wide finite, with its horizon ever widening as we ascend, should call forth our admiration, our adoration, and our love; the wider infinite, which is round about, and into which we can only gaze as we often gaze into the deep sky, should impress us with a feeling of awe in reference to Him who fills it all, and a feeling of humility in reference to ourselves who can know so little.

He who dwells in infinity is at once a God who reveals and a God who conceals himself. We can know, but we can know only in part. The knowledge which we can attain is the clearest, and yet the obscurest, of all our knowledge. A child, a savage, can acquire a certain acquaintance with him, while neither sage nor angel can rise to a full comprehension of him. God may be truly described as the Being of whom we know the most, inasmuch as his works are ever pressing themselves upon our attention, and we behold more of his ways than of the ways of any other; and yet he is the Being of whom we know the least, inasmuch as we know comparatively less of his whole nature than we do of ourselves or of our fellow-men, or of any object falling under our senses. They who know the least of him have in this the most valuable of all knowledge; they who know the most, know but little after all of his glorious perfections. Let us prize what knowledge we have, but feel meanwhile that our knowledge is comparative ignorance. They who know little of him may feel as if they know

much; they who know much will always feel that they know little. The most limited knowledge of him should be felt to be precious, but this mainly as an encouragement to seek knowledge higher and yet higher, without limit and without end. They who in earth or heaven know the most, know that they know little after all; but they know that they may know more and more of him throughout eternal ages.

Hobbes, following out his theory that all our ideas are derived from sensation, reaches the conclusion: "Whatever we imagine is finite. There is therefore no idea or conception which can arise from this word *infinite*. The human mind cannot comprehend the idea (image) of infinite magnitude, nor conceive infinite swiftness, infinite force, infinite time, or infinite power. When we say that anything is infinite, we only mean by this that we are not able to conceive the bounds or limits of that thing, or to conceive any other thing except our own impotence. Therefore the name of God is not employed that we may conceive of him, for he is incomprehensible, and his greatness and power inconceivable, but that we may honor him" (*Leviathan*, III.). "When we say that anything is infinite we do not intend any quality in the thing itself, but a want of power in our own minds; as if we should say that we know not whether it has limits or where. Nor can it be reverently said of God that we have an idea of him in our minds; for an idea is our conception, and there is no conception of anything but what is finite" (*De Cive*, XV.). This doctrine was at once observed to have an atheistical tendency, and John Francis Buddæus remarks: "What Hobbes affirms is therefore most false, that the word 'infinite' only signifies that we cannot conceive the limits of what is so called. For he erroneously passes over what is positive in the idea of an infinite being, and allows only what is negative; and the positive idea he explains thus: 'For, first of all, we conceive a certain supreme idea of perfection; then we confess that this perfection is so great that we cannot reach its bounds or limits'" (*Theses de Atheismo et Superstitione*, V., quoted in Harrison's Notes to Cudworth's *Intellectual System*, Vol. II. p. 593).

Locke was prevented, by the defects of his theory and his antipathy to innate ideas, from developing all that is in our conviction of infinity. Yet, while he maintains that our idea of the infinite is negative, he admits "that it has something of positive in all those

things we apply to it, inasmuch as the mind comprehends so much of the object" (*Essay*, II. xvii. 15). He even admits, though rather incidentally, that the mind has a necessary conviction as to the existence of an infinite. Thus, speaking of space, he says the mind "must necessarily conclude it, by the very Nature and *Idea* of each part of it, to be actually infinite" (4). Again: "I think it unavoidable, for every considering rational creature that will but examine his own or any other existence, to have the notion of an eternal wise Being who had no beginning; and such an *Idea* of infinite duration I am sure I have" (17). It is to be regretted that Locke never unfolded all that is contained in these "necessary" and "unavoidable" mental processes.

Hamilton says our notion of infinity is an "impotency," say an impotency to conceive that space and time should have bounds. I am endeavoring to show in these paragraphs that there is more than this. Hamilton maintains that a conception of the infinite is impossible, because of certain laws or conditions of human intelligence. In particular, Dr. Mansel maintains that it is one condition of consciousness that we distinguish between one object and another, and a second that we perceive the relation between subject and object, both of which imply limitation and relation. These laws will be examined (*infra*, p. 187, foot-note). Hamilton admits that we have a belief in the infinite: "The sphere of our belief is much more extensive than the sphere of our knowledge, and therefore, when I deny that the infinite can by us be known, I am far from denying that by us it is, must, and ought to be believed. This I have indeed anxiously evinced both by reason and authority" (*Metaph.* Vol. II. App. p. 530). But if this faith be beyond consciousness, his view is liable to all the objections which he urges so powerfully against the theory of Schelling, "which founds philosophy on the annihilation of consciousness" (*Discuss.* Art. Philos. of Unconditioned). On the other hand, if this faith be within consciousness, as he evidently supposes when he says (*Metaph.* Vol. I. p. 191), "Knowledge and belief are both contained under consciousness," then the objections derived from the conditions of consciousness, which he urges against the knowledge and idea, apply equally to the belief. Besides, must not a belief in a thing of which we have no conception, be a belief in *Zero*? The mind is shut up, it is supposed, into this belief, by the principles of contradiction and excluded middle, which requires that of two extremes (the absolute and infinite) exclusive of each other, one must be admitted as necessary. But then both these ex-

tremes, *i. e.*, the absolute and infinite, are represented as inconceivable, and I rather think it would defy Hamilton or any other man to tell the contradictory of what is inconceivable. Of this I am sure, that the laws of contradiction and excluded middle, derived from our conceptions, can be applied only to what we conceive, and can have no meaning as referring to what we cannot conceive. He maintains that our conceptions as to the infinite land us in contradictions. "We are altogether unable to conceive space as bounded, as finite; that is, as a whole beyond which there is no further space." "On the other hand, we are equally powerless to realize in thought the possibility of the opposite contradictory. We cannot conceive space infinite or without bound" (*Metaph.* Lect. 38). I may be permitted to quote the criticism I have offered on this alleged contradiction: "The seeming contradiction here arises from the double sense in which the word 'conceive' is used. In the second of these counter-propositions, the word is used in the sense of imaging, or representing in consciousness, as when the mind's eye pictures a fish or a mermaid. In this signification we cannot have an idea or notion of the infinite. But the thinking, judging, believing power of the mind is not the same as the imaging power. The mind can think of the class fish, or even of the imaginary class mermaid, while it cannot picture the class. Now, in the first of the opposed propositions, the word 'conceive' is taken in the sense of thinking, deciding, being convinced. We picture space as bounded, but we cannot think, judge, or believe it to be bounded. When thus explained, all appearance of contradiction disappears: indeed, all contradictions which the Kantians, Hegelians, and Hamiltonians are so fond of discovering between our intuitive convictions will vanish, if we but carefully inquire into the nature of the convictions. Both propositions, when rightly understood, are true, and there is no contradiction. They stand thus: 'We cannot image space as without bounds;' 'we cannot think that it has bounds, or believe that it has bounds.' The former may perhaps be a creature impotency; the latter is most assuredly a creature potency,—is one of the most elevated and elevating convictions of which the mind is possessed, and is a conviction of which it can never be shorn."

It is of something, say of space, or of the attribute of something, say of the power of God, that we predicate that they are infinite. This certainly implies that no space can be added to infinite space, but does not imply that space, because it is infinite, must contain all existence, must comprise, say wisdom and goodness. It implies that

God cannot be more righteous than he is, but does not involve that his righteousness or even that his being must embrace all being. Dr. Mansel, in the *Limits of Religious Thought*, 3d ed. p. 46, quotes the language of Hegel: "What kind of an Absolute Being is that which does not contain in itself all that is actual, even evil included?" and refers to Schelling, Schleiermacher, and Parker as holding similar views. I am sure that the mind is not shut up into any such doctrine by its native convictions. Against such a view the artillery of Hamilton and Mansel tells with irresistible power. They have shown most conclusively that such a notion involves inextricable confusion and hopeless contradictions. I freely abandon such a conception to them, to tear it to pieces with their remorseless logic. But I decidedly demur to the statement of Dr. Mansel, "that which is conceived as absolute and infinite must be conceived as containing within itself the sum, not only of all actual, but of all possible modes of being." I have nothing here to say as to the absolute, but I do affirm that we have a conception as to the infinite, the perfect — I do not say *of* the infinite, the perfect — which does not imply this consequence, and that we can both think and speak of infinity without falling into contradictions. I hold it to be quite possible to muse and reason about the attribute "infinite," as it is in fact conceived and believed in by the mind, without falling into the difficulties in which the German supporters of the absolute have involved themselves; and that we can think of God and write about God as infinite, without being compelled by any logical necessity to look upon him as embracing all existence, or to reckon it impossible or inconceivable that he should create a world and living agents different from himself. We cannot conceive that God's power should be increased, but we can conceive it exercised in creating beings possessed of power. We cannot conceive his goodness to be enlarged, but we can, without a contradiction, conceive him creating other beings also good. Nor are we by this conception shut up to the conclusion that the creature-power or creature-excellence might be added to the divine power and goodness, and thus make it greater. To all quibbles proceeding in this line, I say that for aught I know it may not be possible they should be added, or that, if added, they should increase the divine perfections; and no reply could be given, drawn either from intuition or experience, the only lights to which I can allow an appeal. Nor will I venture to affirm how much truth there is in the following statement of Howe (*Living Temple*, Part I. Chap. iv.): "This necessarily is such to which

nothing can be added, so as that it should be really greater or better or more perfect than it was before." But then it is said, could you not add the finite, and "is there, therefore, nothing more of existent being than there was before this production?" It is answered, "Nothing more than virtually was before; for when we suppose an infinite being, and afterwards a finite, this finite is not to be looked upon as emerging or springing up of itself out of nothing; or proceeding from some third thing as its cause, but as produced by that infinite, or springing out of that which it could not do but as being before virtually contained in it. For the infinite produces nothing which it could not produce, and what it could produce was beforehand contained in it as in the power of its cause."

I had noticed both these aspects of infinity before I discovered that I had been anticipated by Aristotle in *Phys. Aus.* III. 6. He describes the infinite as that which has always something beyond: *οὐ γὰρ οὗ μηδὲν ὕξω, ἀλλ' οὗ ἀει τι ἔξω ἐστι, τοῦτο ἄπειρόν ἐστιν.* But then the complete, the entire, is that which has nothing beyond: *οὗ δε μηδὲν ἔξω, τοῦτ' ἐστὶ τέλειον καὶ ὅλον.* I look on both these remarkable expressions as applicable, the one to our idea, the other to the object. Sir W. Hamilton would identify the *ὅλον* with the German "Absolute," but Aristotle gives a homelier account when he describes the "whole" as that which needs nothing beyond, "as a man or a casket." It could be shown that theologians, in laboring to describe infinity, have very often caught glimpses of one or other or both these characteristics, and have fixed them with more or less clearness and decision.

In musing on divine things, the thought occurred to Anselm that it might be possible to find a single argument which would of itself prove that there is a God, and that he is the Supreme Good. Man, he says, is able to form a conception of something than which nothing greater can be conceived; and this conception, he argues, implies the existence of a corresponding being (*Proslogion*). A similar argument occurred to Descartes. He found in himself the idea of a Perfect being; and he argues that in this idea the existence of the Being is comprised, as the equality of the three angles to two right angles is comprised in the idea of a triangle (*Meth.* p. 4, etc.). Leibnitz acknowledges that the argument is valid; provided he is allowed to supply a missing link, and to show that it is possible that God should exist (*Op.* p. 273). It may be doubted whether these arguments for the Divine Existence, derived from the mere idea

of the Perfect, are valid, independent of external facts. But these eminent men are right in saying that the mind has some conception and conviction as to the perfect; and these combine, with the observation of traces of design, to enable us to construct an argument for the Divine Existence.

CHAPTER IV.

THE EXTENT, TESTS, AND POWER OF OUR NATIVE BELIEFS.

THE above are some of the principal — I will not venture to say that they are the whole — of our native beliefs. As they grow upon our native cognitions, so they attach themselves to our primitive judgments, in most of which there is more or less of the faith element, that is, belief in the existence of an object not directly known. There is belief, for instance, involved in the judgment that this effect has a cause, which cause may be unknown. There is belief, too, exercised in certain of our moral judgments, as when we believe in the integrity of a good man, or trust in the word of God, even when his providence seems in opposition. But these are topics which fall to be discussed specially in subsequent books.

It is scarcely necessary to remark that faith is an affection of mind, not limited to our primary convictions. Faith collects round our observational knowledge, and even around the conclusions reached by inference. We believe — the course of nature being unchanged by its Author — that the seed cast into the ground in spring will yield a return in autumn, that the sun will rise to-morrow as he has done to-day, and that the planet Saturn a year hence will be found in the very place calculated for us by the astronomer. We exercise faith, every one of us, in listening to the testimony of credible witnesses, and faith is in one of its liveliest forms when it becomes

trust in the ability, the excellence, and the love of a fellow-creature. Our highest faiths are those in which there is a mixture of the observational and intuitional elements, the observational supplying the object, and the intuitional imparting to them a profundity and a power as resting on an immovable foundation and going out into the vast and unbounded. In particular, when God has been revealed, faith ever clusters round him as its appropriate object.

There are canons whereby to try the trustworthiness of our beliefs. *First*, so far as our intuitive beliefs are concerned, there are the general tests of intuition. Take our belief in the infinite. We have to ask, Is the truth believed in self-evident, or does it lean on something else? Is it necessary? Can we believe that space and time and the Being dwelling in them have limits? Is it universal, that is, do men ever practically believe that they can come to the verge of time and space? Such queries as these will settle for us at once what beliefs are original and fundamental. We should put these questions to every belief that may suggest itself to our own minds. We are entitled to put them to every faith which may be pressed on us by others. Then, *secondly*, as to our derivative or observational beliefs, there are the ordinary rules of evidence, as enunciated in works of special or applied logic, or as stated in books on the particular departments of knowledge, or, more frequently, as caught up by common experience, and incorporated into the good sense of mankind. In no such case are we to believe without proof being supplied, and we are entitled and required to examine the evidence. *Thirdly*, as to mixed cases in which our faith proceeds partly on intuition and partly on observation, our business is carefully to separate the two, and to judge each by its appro-

priate tests. In the use of such rules as these, while led to yield to the faith sanctioned by our rational nature, we shall at the same time be saved from those extravagant credences which are recommended to us by unauthorized authority, by mysticism which has confused itself, by superstition, by bigotry, by fanaticism, by pride, or by passion.

Looked at under one aspect, belief might be considered as so far a weakness cleaving to man, for where he has faith, other and higher beings may have immediate knowledge. But when contemplated under other aspects, it is an element of vast strength. In heaven, much of what here faith is, will be brightened into sight, but even in heaven faith abideth. Our faiths widen indefinitely the sphere of our convictions; they surround our solid cognitions with an atmosphere in which it is bracing and exhilarating to walk, which no doubt has its mists and clouds, but has also a kindling and irradiating capacity, and may be warmed into the fervor and reflect the very light of heaven in a thousand varied colors. He who would tear off from the mind its proper beliefs, would in the very act be shearing it of one of its principal glories.

What a power even in our earthly faiths, as when men sow in the assurance that they shall reap after a long season, and labor in the confidence of a reward at a far distance! What an efficacy in the trust which the child reposes in the parent, which the scholar puts in his master, which the soldier places in his general, and which the lover commits to the person beloved! These are among the chief potencies which have been moving mankind to good, or, alas! to evil. As it walks steadfastly on, it discovers an outlet where sense thought that the path was shut in and closed. Difficulties give way as it advances,

and impossibilities to prudence speedily become accomplishments before the might and energy of faith. To it we owe the greatest achievements which mankind have effected in art, in travel, in conquest; setting out in search of the unseen, they have made it seen and palpable. It was thus that Columbus persevered till the long-hoped-for country burst on his view: it is always thus that men discover new lands and new worlds outside those previously known.

But faith has ever a tendency to go out with strong pinions into infinity, which it feels to be its proper element. It has a telescopic power, whereby it looks on vast and remote objects, and beholds them as near and at hand. There is a constancy in its course and a steadiness in its progress, because its eye is fixed on a pole-star far above our earth. How lofty its mien as it moves on, looking upward and onward, and not downward and backward, with an eye kindled by the brilliancy of the object at which it looks! Hence its power, a power drawn from the attraction of the world above. No element in all nature so potent. The lightning cannot move with the same velocity; light does not travel so quick from the sun to the earth as faith does from earth to heaven. It heaves up, as by an irresistible hydrostatic pressure, the load which would press on the bosom. It glows like the heat, it burns like the fire, and obstacles are consumed before its devouring progress. Persecution, coming like the wind to extinguish it, only fans it into a brighter flame.

The proper object of faith is, after all, the Divine Being. Time and space and infinity seem empty and dead and cold, till faith fills them with the Divine Presence, quickens them with the Divine Life, and warms them with the Divine Love. When thus grounded, how

stable! firmer than sense can ever be, for the objects at which it looks are more abiding. "The things which are seen are temporal, but the things which are unseen are eternal." When thus fixed, the soul is at rest, as secure in Him to whom it adheres. When thus directed, all its acts, even the meanest, become noble, being sanctified by the divine end which they contemplate. All doubts are now decided on the right side by eternity being cast into the scale. When thus associated, its might is irresistible. It carries with it, and this according to the measure of it, the power of God. It is, no doubt, weak in that it leans, but it is strong in that it leans on the arm of the Omnipotent. It is a creature impotency which makes us lay hold of the Creator's power.

BOOK III.

PRIMITIVE JUDGMENTS.

CHAPTER I.

THEIR GENERAL NATURE, AND A CLASSIFICATION OF THEM.

I.

THE mind of man has a set of Simple Cognitive — called by Sir William Hamilton Presentative — Powers, such as Sense-Perception and Self-Consciousness, by which it knows objects before it. From these we obtain our Primitive Cognitions. It has also a set of Reproductive Powers, such as the Memory and the Imagination, by which it recalls the past in old forms or in new dispositions. Out of them arise many of our Faiths, as in the existence of objects which have fallen under our notice in *time* past, and in an *infinity* surpassing our utmost powers of imagination. But the mind has also a Power of Comparison by which it perceives Relations and forms Judgments.

Our Primitive Judgments are formed from our Primitive Cognitions and Primitive Beliefs. On comparing two or more objects known or believed in, or, we may add, imagined, we discover that they bear a necessary relation to each other. The necessity of the relation arises from the nature of the things. We discover that objects have a certain relation because of their nature as it has become known to us, or as we have been led to

believe it to be; and whenever we are led to discover a necessary relation, it is because we have such an acquaintance with things as to observe that there is a relation implied in their very nature. It should be added, that because of our limited and imperfect knowledge, there may be many necessary relations which are altogether unknown to us, even among objects which are so far known.

In accepting this account, we are saved from the extravagant positions taken up by many metaphysicians as to the a priori judgments of the mind, which they represent as fashioned by a power of reason independent of things, whereas they are formed on the contemplation of things, and of the nature of things, so far as apprehended. Such questions as the following are often put by ingenious minds: How is it that two straight lines cannot enclose a space? How is it that time appears like a line stretching behind and before, whereas the analogous thing, space, extends in three dimensions? The proper reply is, that all this follows from the very nature of space and time. And if the question be put, How do we know that two straight lines cannot enclose a space, and that time has length without breadth? the answer is, that all this is involved in our primary knowledge of space and time. No other answer can be given; no other answer should be attempted. Our primitive judgments proceed on our primitive cognitions and beliefs, which again are founded on the nature of things, as we are constituted to discover it.

II.

It will be necessary at this place to examine a very common representation that the mind begins with Judgments, rather than the knowledge of individual things,

and that there is judgment or comparison in all knowledge. According to Locke, knowledge is nothing but the perception of the connection and agreement, or disagreement and repugnancy, of any two ideas. Sir W. Hamilton and Dr. Mansel maintain that in every cognitive act there is judgment or comparison. In opposition to Locke, I hold that the mind does not commence with ideas and the comparison of ideas, but with the knowledge of things, of which it can ever after form ideas, and which it is able to compare. I reckon it impossible for the mind, from mere ideas not comprising knowledge, or from the comparison of such ideas, ever to rise to knowledge, to the knowledge of things. The system of Locke is at this point involved in difficulties from which it cannot be delivered by those who hold, as he did, that man can reach a knowledge of objects. The only consistent issue of such a doctrine is an idealism which maintains that the mind can never get beyond its own circle or globe, and is there engaged forever in the contemplation and comparison of its own ideas, in regard to which it never can be certain whether they have any external reality corresponding to them. The doctrine of Hamilton and Mansel is not so objectionable, as they allow that we compare objects. Still it is an unsatisfactory statement to make all our knowledge to be not of things, but of the comparison or the relations of things. If I interpret my consciousness aright, we first know things, and then are able to compare them because of our knowledge of their qualities. Any other doctrine makes our knowledge indirect and remote, — we know not the object, but merely a relation of it to some other object, of which object our knowledge must also be relative, that is, in relation to something else.

I acknowledge that every intuitive cognition may fur-

nish the matter and supply the ground for a judgment. Thus, out of the knowledge of a stone as before me, I can form the judgment, "This stone is now present," by an analysis of the concrete cognition. The knowledge of self as thinking enables me, as I distinguish between the *ego* and the particular thought, and observe the relation of the two, to affirm, "I think." I believe that every primary cognition may entitle me, by an easy abstraction and comparison, to frame a number of primary judgments. Thus the cognition of the stone enables me to say, "This stone exists;" "This stone is here;" and if the perception be by the eye, "This stone is extended;" and if it be by the muscular sense, "This stone resists pressure;" while the cognition of self, as perceiving the stone, enables me to affirm, "I perceive the stone;" "I exist;" "I perceive." The two indeed — our primary cognitions and beliefs on the one hand, and our primary judgments on the other — are intimately connected. Every cognition furnishes the materials of a judgment; and a judgment possible, I do not say actual, is involved in every cognition. As the relation is implied in the nature of the individual objects, and the judgment proceeds on the knowledge of the nature of the objects, so the two, in fact, may be all but simultaneous, and it may scarcely be necessary to distinguish them, except for rigidly exact philosophic purposes. Still it is the cognition which comes first, and forms the basis on which the judgments are founded; in the case of the primitive judgments, directly founded. It should be frankly admitted that what is given in primary cognition is in itself of the vaguest and most valueless character, till abstraction and comparison are brought to bear upon it. Still our cognitions and beliefs furnish the materials of all that the discursive understanding weaves into such rich and often complicated webs of comparison and inference.

III.

It is to be carefully observed that our primitive cognitions and beliefs being of Realities, all the intellectual processes properly founded on them must relate to realities also. If what we proceed on be unreal, that which we reach by a logical process may also be unreal. If space and time, for example, have, as some suppose, no reality independent of the contemplative mind, then all the relations of space and time, as unfolded in mathematical demonstrations, must also be regarded as unreal in the same sense. On the other hand, if space and time have (as I maintain) an existence irrespective of the mind thinking about them, then all the necessary relations drawn from our knowledge may also be regarded as having a reality independent of the mind reflecting on them. Not that they are to be supposed to have an existence as individuals, or independent of the things related; they have precisely such a reality as we are intuitively led to believe them to have; that is, they exist as necessary relations of the separate things.

IV.

It may be as well to announce here generally, what will be shown specially at every stage as we advance, that all the primitive judgments of the mind are Individual. The mind does not in its spontaneous operations declare that it is impossible for the same thing to be and not to be, but upon being satisfied that a certain thing exists, it at once sets aside the thought or assertion that it does not exist. It does not affirm in a general proposition that no two straight lines can enclose a space, but it says these two straight lines cannot enclose a space; and it would say the same of every other two straight

lines. It does not metaphysically announce that every quality implies a substance, that every effect must have a cause; but it declares of this property contemplated that it implies a substance, and of this given effect that it must have had a cause. It is out of these individual judgments that the general maxim is obtained by a process of generalization. But then it is to be observed that it is not a generalization of an outward experience, — which must always be limited, and never can furnish ground for a necessary and universal proposition, — but of inward and immediate judgments of the mind, which carry in them the conviction of necessity, which necessity therefore will attach itself to the general maxim, on the condition of our having properly performed the discursive operation.

V.

It is necessary for our purposes to Classify the primary judgments pronounced by the mind; but this is by no means an easy task. An arrangement may, however, serve very important ends, even though it be not thoroughly exhaustive and altogether unobjectionable. The following is to be regarded simply as the best which I have been able to draw out, and may be accepted as a provisional one till a better be furnished. The mind seems capable of noticing intuitively the relations of, —

I. IDENTITY AND DIFFERENCE.
II. WHOLE AND PARTS.
III. RESEMBLANCE.
IV. SPACE.
V. TIME.
VI. QUANTITY.
VII. ACTIVE PROPERTY.
VIII. CAUSE AND EFFECT.

VI.

It is said to be the office of judgment or comparison to discover Relations. Let us properly understand what is meant by relations. It always implies two or more

things. The relation depends on the nature of the things. We must know so far the nature of the things before we can discover their relation. In Identity we know the object as at one time and again at another time, and looking at each of the things, and comparing them, we discover them to be the same. In Comprehension we have before the mind an object, and also a part or parts, say a house and a window, and we decide the window to be part of the house. In Resemblance we perceive a quality in each of the objects, and pronounce it the same. It should be noticed here that while the quality is the same, this does not make the objects identical. In Space we discover relations of extension and position, say of the angles of a triangle to one another. In Time we have always a present perception, and we remember the past or anticipate the future, and declare their relations of priority and posteriority. In Quantity we look at the muchness of objects, as being less or more, and at their proportions. In Quality we contemplate objects as affecting each other, say as attracting one another. In Causation we discover a power in one object to affect another.

A judgment is usually defined as a comparison of two notions. Upon which Mr. J. S. Mill remarks, that "propositions (except where the mind itself is the subject treated of) are not assertions respecting our ideas of things, but assertions respecting things themselves," adding, "My belief has not reference to the ideas, it has reference to the things" (*Logic*, I. v. 1). There is force in the criticism, yet it does not give the exact truth. In propositions about extra-mental objects, we are not comparing the two notions as states of mind; so far as logicians have proceeded on this view, they have fallen into confusion and error. But still, while it is true that our predications are made, not in regard to our notions, but of things, it is in regard to things apprehended, or of which we have a notion, as Mr. Mill admits: "In order to believe that gold is yellow, I must indeed have the idea of gold and the idea of yellow, and something having reference to those ideas must take place in my mind."

According to Locke, "Perception is the first operation of all our intellectual faculties, and the inlet of all knowledge into our minds" (*Essay*, II. x. 15). According to the view I take, perception *is* knowledge. According to Locke, "Knowledge is nothing but the Perception of the Connection and Agreement, or Disagreement and Repugnancy, of any of our ideas" (IV. i. 1). See King's and Reid's review of this doctrine of Locke, *supra*, p. 45. Hamilton says: "Consciousness is primarily a judgment or affirmation of existence. Again, consciousness is not merely the affirmation of naked existence, but the affirmation of a certain qualified or determinate existence" (*Metaph.* Lect. 24. See, also, Notes to Reid's Works, pp. 243, 275). Dr. Mansel says: "It may be laid down as a general canon of Psychology, that every act of consciousness, intuitive or discursive, is comprised in a conviction of the presence of its object, either internally in the mind, or externally in space. The result of every such act may thus be generally stated in the proposition, 'This is here.'" He is obliged to distinguish between such a psychological judgment and a logical one. "The former is the judgment of a relation between the conscious subject and the immediate object of consciousness. The latter is the judgment of a relation which two objects of thought bear to each other" (*Proleg. Log.* Chap. ii.). What he calls a psychological judgment seems to me to be a cognition, which may be explicated into a judgment, which judgment will be a logical one. Hamilton and Mansel carry out still further their doctrine of comparison being involved in knowledge. Dr. Mansel quotes J. G. Fichte: "Alles, was für uns Etwas ist, ist es nur inwiefern es Etwas anderes auch nicht ist; alle Position ist nur möglich durch Negation." This doctrine is in perfect consonance with Fichte's idealism, but does not consort so well with Scottish realism. And yet Hamilton says: "The knowledge of opposites is one; thus we cannot know what is tall without knowing what is short; we know what is virtue only as we know what is vice; the science of health is but another name for the science of disease" (*Metaph.* Lect. 13; see, also, 34). So, also, Dr. Mansel (*Lim. of Relig. Thought*, Lect. 3), "To be conscious, we must be conscious of something; and that something can only be known as that which it is, by being distinguished from that which it is not." This seems to me a doctrine wrong in itself, and of very doubtful tendency. True, there are some ideas confessedly relative, such as the ideas of tall and short. But, on the other hand, there are cognitions, and there are ideas which are positive; thus we know self as thinking, we know

virtue as good, without reference to anything else, and it is because we are thus able to know things separately that we are able to discover relations between them. We do not first discern differences and then know the things: we first know the things and then observe points of resemblance or difference.

Both Locke and Kant give the mind a power of intuition, but they bring it in at different places. Locke confines it to our judgments; we perceive intuitively the relation of ideas (*Essay*, B IV. 1). Kant gives the mind an intuition of phenomena under forms which it imposes, but withholds from the mind any intuition in judgment or understanding. I give the mind, within rigid limits, an intuition both of things and the relations of things.

Locke speaks of relations as being infinite, and mentions only a few. He specifies Cause and Effect, Time, Place, Identity and Diversity, Proportion, and Moral Relations (*Essay*, II. XXVIII.). Hume mentions Resemblance, Identity, Space and Time, Quantity, Degree, Contrariety, Cause and Effect. Kant's Categories are, — (I.) Quantity, containing Unity, Plurality, Totality; (II.) Quality, containing Reality, Negation, Limitation; (III.) Relation, comprising Inherence and Subsistence, Causality and Dependence, Community of Agent and Patient; (IV.) Modality, under which are Possibility and Impossibility, Existence and Non-Existence, Necessity and Contingence. Dr. Brown arranges them as those of, — (I.) Coëxistence, embracing Position, Resemblance or Difference, Proportion, Degree, Comprehension; (II.) Succession, containing Causal and Casual Priority. Of late there has been a tendency among British psychologists to narrow the relations which the mind can discover. Sir W. Hamilton's account (*Metaph.* Lect. 34) is a retrogression in science. In comparison, — (1.) We affirm the existence of the *ego* and the *non-ego;* (2.) We discriminate the two; (3.) We notice resemblance or dissimilarity; (4.) We collate the phenomena with the native notion of substance; (5.) We collate them with the native notion of causation. Prof. Bain says (*Senses and Intell.* p. 329), "What is termed judgment may consist in discrimination on the one hand, or in the sense of agreement on the other: we determine two or more things either to differ or to agree. It is impossible to find any case of judging that does not, in the last resort, mean one or other of these two essential activities of the intellect." I wish my readers to compare these views of Hamilton and Bain with those of the older thinkers quoted above, and with those expounded in this work. Both seem to me to narrow the

mind's power of discovering relations among things, which in fact is the highest intellectual power which the mind can exercise. Hamilton's account seems to me to be an unnatural one, especially what he says about a collation with "native notions" of substance and causation. We discover the relations in looking at things. Bain's account in confining the mind's power to the discovery of agreement and difference is miserably meagre.

CHAPTER II.

RELATIONS INTUITIVELY OBSERVED BY THE MIND.

I.

Relation of Identity. — We have seen that every object known by us is known as having being; I do not say an independent being, but a separate and individual being. This being, continuing in the object, constitutes its identity. This identity every object has as long as it exists, and this whether the identity does or does not become known to us or to any other created being. An object has identity not because the identity is known to us; but an object having continued being, and therefore identity, intelligent beings may come to discover it. We are so constituted as to be able to know being, — that is, that the object known to us possesses being, — and we look on the object as retaining that being as long as it exists. We are prepared to decide then that if we ever fall in with this object again, it will have retained its identity. We may fall in with the same object again without discovering it to be the same, because of a defect of memory, or because the object was disguised in a crowd. But in regard to certain objects, we cannot avoid observing the sameness, and cannot be deceived in pronouncing them the same.

So far as self is concerned, we discover the identity intuitively as we look on the objects presented in self-consciousness and memory. We have an immediate knowledge of self in every exercise of consciousness. We have a recollection of self in some particular state

in every exercise of memory. The mind has thus before it, at every waking moment, a knowledge of a present self; and in every exercise of memory it has a past self; and in looking at and comparing the two, it at once proclaims the identity. It will be observed that here, as in every other case, the judgment throws us back on cognition, specially personality, and belief; the necessary facts on which the mind pronounces the necessary judgment are furnished in the exercise of consciousness and memory.

In regard to objects external to the mind, we have no such intuitive means of discovering an identity. Our original perceptions do not extend even to the identity of our bodily frame. Every particle of matter in the body may be changed in seven years, as physiologists tell us, in perfect accordance with our intuitive perceptions. We may be without a body in the state between death and the resurrection, and may receive an entirely new and spiritual body in heaven, and yet retain all the while our identity and feeling of identity. And in the case of extra-organic objects there is always a possibility of doubt as to whether what we perceive now is the same object as fell under our notice at some previous time. The infant, prompted by his instinct as to the continuance of being, and making a wrong application of it, will often be inclined to discover identity where there is only resemblance, will be apt, for example, to look on every man he meets with as his father. As he advances in life he will be led to pay more regard to differences. As to when there is a sufficient amount of resemblance to denote a sameness, this is to be determined solely by the laws of experiential evidence. In some cases, as when we recognize our friends and familiar objects, there is moral certainty; in other cases there is probability, less

or greater, according to the proof which is perceived or can be adduced (*a*).

The intuitive judgments are always individual, and are pronounced on the objects being presented. When generalized, they take the form of such metaphysical maxims as these: "It is impossible for the same thing to be and not to be at the same time." "Everything preserves its identity as long as it exists." "We are sure that we are the same beings as we were since consciousness began, and must continue the same as long as consciousness exists."

The above are judgments pronounced on individual objects contemplated. Under the same head there fall to be placed predications which the mind makes at once and intuitively in regard to relations which have been previously perceived and sanctioned by the mind. Suppose that, on the ground of experience, we become convinced that no reptile is warm-blooded; on the bare contemplation of the notions, we at once and intuitively declare that no warm-blooded animal can be a reptile. In all such cases it is presupposed that there is a previously discovered relation. It is possible that the mind may have been deceived, and that the relation does not really exist; and in this case the judgment pronounced according to the law of identity would also be wrong as a matter of fact. Thus if a proposition were given that "no mammal is warm-blooded," the mind would pronounce that no "warm-blooded animal can be a mammal." The error, however, would lie, not in the law of thought, but in the original proposition furnished.

This is the proper place to explain the famous distinction drawn by Kant between Analytic and Synthetic Judgments. Analytic Judgments are those in which the predicate is involved in the very notion which constitutes

the subject; as when we say that "an island is surrounded with water," "a king has authority to rule," "the moral law should be obeyed." All such judgments are said, in the nomenclature of the Kantian school, to be a priori. We have come to entertain certain apprehensions in regard to island, king, and moral law, and now we pronounce a set of judgments on the bare contemplation of these, and involved in them by the law of identity. The judgments involved in the general law of identity, the analytic judgments of Kant, have been carefully examined of late years in Germany. They take the following forms: I. The Law of Identity Proper, which requires us to recognize the same to be the same, presented it may be at different times, or in different circumstances, or in different forms. II. The Law of Contradiction, according to which it is impossible for the same thing to be and not to be at the same time; this whatever the thing be, an independently existing object, or an attribute. III. The Law of Excluded Middle, which requires that when two propositions are in the relation of contradictories, one or other must be true, and yet both cannot be true. These Laws have a great importance in Formal Logic. Being carried out and applied in special forms, they show what may be drawn from any proposition or set of propositions given, and they keep thought consistent with itself. (*b*)

Synthetic (as distinguished from Analytic) Judgments are those in which the predicate affirms or denies something more than is embraced in the concept; as when we say "gold is yellow," "body gravitates," "sin will be punished." Most of these judgments are said to be a posteriori, that is, they are the result of gathered observation. Others of them are called a priori, being prior to observation. But the account given by Kant cannot

be accepted by me, as it is not consistent with realism. He makes the judgments formed by the mind by its own independent power, according to its own laws and imposed on things. I hold that we pronounce them as we look at things. This makes them relate to things. There are cases innumerable in which we form judgments on the bare inspection of things, without any gathered observation. We perceive the relation at once, and the judgment is necessary and universal. Thus we perceive that things which are equal to the same thing are equal to one another, and that what begins to be must have a cause. Such relations can be observed, generalized, and expressed. They may be called a priori judgments, but I think more appropriately primitive judgments. I am in this Book to unfold these Judgments.

(*a*) These views determine the light in which we should look on as "pretty" a controversy as ever raged in metaphysics or out of it, as to whether two things in every respect alike — say two drops of water — would or would not be identical. Leibnitz held that each thing differed from every other by an internal principle of distinction, and that no individuals could be alike in every respect, and that if they were, they could have no principle of individuation (*Op.* p. 277). Kant criticised this view, and urged that even though they were in every respect alike, they would differ as being in different parts of space (*Werke*, Bd. II. p. 217). The common representation was that they would differ numerically. I am not sure that any of these accounts is correct. It is quite conceivable that there might be two things in every respect alike, except in their individual being. It is not their existence in different parts of space which constitutes their difference, but as different in their being, they exist in different parts of space. They have a distinct being, not because they are numerically different, but they are numerically distinct because they have a distinct being.

(*b*) I have shown in my work on *Logic*, at the close, how these Analytic Judgments regulate discursive thought. Identity Proper rules affirmative inferences immediate and mediate. Contradiction

controls negative inferences. Excluded Middle guides in our inferences from contradictories.

II.

Relations of Whole and Parts. — It is a fundamental principle of this treatise that the mind begins with the concrete, — a truth which should always go along with the other, which has, however, been more frequently noticed, that it begins with the individual. Being furnished with the concrete in its primary knowledge and beliefs, — and we may add, imaginations, — the mind can consider a part of the concrete whole separate from the other parts. In doing so, it is much aided by the circumstance that the concrete whole seldom comes round in all its entireness. The child sees a man with a hat to-day and without his hat to-morrow, and is thus the better enabled to form a notion of the hat apart from the man that wore it.

In all abstraction there is judgment or comparison; that is, we discover a relation between two objects contemplated. We contemplate a concrete whole, and we contemplate a part, and observe a relation of the part as a part to the whole. It should be admitted that, without any exercise of comparison, we are capable of imaging a part of a whole, in cases where the part can be separated; thus, having seen a man on horseback, I can easily picture to myself the man separately, or the horse separately, without thinking of any relation between them; but in such processes there is no exercise of abstraction. Abstraction is eminently an intellectual operation. In it we contemplate a part as part of a whole, say a quality as a quality of a substance; for example, transparency as a quality of ice, or of some other substance. In all such exercises there is involved a Correlative Power. This power may be called Com-

prehension, inasmuch as it contemplates the whole in its relation to the parts; or Abstraction, inasmuch as it contemplates the part as part of a whole; and the Faculty of Analysis and Synthesis, inasmuch as it resolves the whole into its parts, and shows that the parts make up the whole. There is, if I do not mistake, intuition involved in every exercise of this power. The operations of the intuition are always singular, but they may be generalized, and being so, they will give us the following as involved in Abstraction: —

1. *The Abstract implies the Concrete.* This arises from the very nature of abstraction. When an object is before it in the concrete, the mind can separate a quality from the object, and one quality from another. It can distinguish, for example, between a man taken as a whole, and any one quality of his, such as bodily strength; and distinguish between any one quality and another, as between his bodily strength and intellectual power, between his intellectual faculties and his feelings, and between any one feeling, such as joy, and any other feeling, such as sorrow. But we are not to suppose that, while we can thus distinguish between a whole and its parts, between an object and its qualities, between one quality and another, therefore the part can exist independent of the whole, or the quality of its object. Every abstracted quality implies some concrete object from which it has been separated in thought.

2. *When the Concrete is Real, the Abstract is also Real.* In this respect there is a truth in the now exploded doctrine of realism. Abstraction, if it proceeds on a reality and is properly conducted, ever conducts to realities. It is thus a most important intellectual exercise for the discovery of truth, enabling us to discover the permanent amidst the fleeting, the real amidst the

phenomenal. As I look on a piece of magnetized iron, I know it to be a real existence, and I think of it as having a certain form, and of its attracting certain objects, and I must believe that this figure is a reality quite as much as the iron which has the form, and that the attractive power is not a mere fiction, any more than the iron of which it is a property. But it is to be carefully observed that this abstract thing, while it has an existence, has not necessarily an independent existence. We have already seen that when it is a quality it must always be the quality of a substance. Beauty is certainly reality, but it has no existence apart from a beautiful person or scene, of whom or of which it has an attribute.

A philosopher, says Kant, was asked, What is the weight of smoke? and he answered, Subtract the weight of the ashes from the weight of the fuel burned, and we have the weight of smoke. At the basis of his judgment is the intuitive maxim that the whole is equal to the sum of its parts. The individual intuitive judgments which the mind pronounces on looking at whole and parts may perhaps be all generalized into two principles: (1.) The parts make up the whole. (2.) The whole is equal to the sum of its parts. From the first of these we may derive the rules, that the abstract part is involved in the concrete whole, and that the abstract, as part of a real concrete thing, is also a real. From the first we have the rule that each part is less than the whole; and from the second the maxim that the whole is greater than the parts. It is of importance to have such maxims as these accurately enunciated in mathematical demonstration and logical and metaphysical science. Spontaneously, however, the mind does not form any such general axioms, which are merely the generalized expression of its individual judgments.

Still, the maxim is underlying many of our thoughts in all departments of investigation. Thus in Natural History it urges us to seek for a classification in which all the members of any subdivision will make up the whole. It impels the chemist to look out for all the elements which go to constitute the compound substance. In psychology and metaphysics it prompts us to analyze a concrete mental state into parts, and insists that in the synthesis the parts be equal to the whole. In logic it demands, as a rule of division, that the members make up the class, and is involved in all those processes in which we infer (in subalternation) that what is true of all must be true of some; or (in disjunctive division) that what is true of one of two alternatives (A and B), and is not true of one (A), must be true of the other (B). In most of such cases the more prominent elements are got from experience; in some of them, other intuitions act the more important part; but in all of them there are intuitions of whole and parts underlying the mental processes, — unconsciously and covertly, no doubt, but still capable of being brought out to view for scientific purposes.

III.

The Relations of Resemblance. — It has been generally acknowledged that man's primary knowledge is of individual objects: not that he as yet knows them to be individual; it is only after he has been able to form general notions that he draws the distinction, and finds that what he first knew was singular. What is meant is, that the boy does not begin with a notion of man or woman, or humanity in general, but with a knowledge of a particular man, say his father, or a particular woman, say his mother; and it is only as other men and other

women come under his notice, and he observes their points of agreement, that he is able to rise to the general notion of man, or woman, or humankind.

In the mental processes involved in generalization, the most important part is the observational one. When we discover, for example, the resemblance of plants, and proceed to group them into species, genera, and orders, the operation is one of induction and comparison. There is no necessity of thought involved in the law that roses have five petals, or that fishes are cold-blooded, or indeed in any of the laws of natural history. Still there are laws of thought which have a place in the generalizing process.

1. *The universal implies singulars.* — The mind pronounces this judgment when it looks at the nature of the individuals and the generals. The universal is not something independent of the singulars, prior to the singulars, or above the singulars. A general notion is the notion of an indefinite number of objects possessing a common attribute or attributes, and includes all the objects possessing the common quality or qualities. It is clear, therefore, that the general proceeds on and presupposes individuals. If there were no individuals, there would be no general; and if the individuals were to cease, the general would likewise cease. If there were no individual roses, there would be no such thing as a class of plants called roses.

2. *When the singulars are real, the universal is also real;* always, of course, on the supposition that the generalization has been properly made. There exists, we shall suppose, in nature, a number of objects possessing common attributes; we have observed their points of resemblance, and put them in a class: has, or has not, the class an existence? In reply, I say that the genus

has an existence and a reality as well as the individual objects. An indefinite number of animals chew the cud, and are called ruminant; the class ruminant has an existence quite as much as the individual animals. But let us observe what sort of reality the class has; it is a reality merely in the individuals, and in the possession of common qualities by these individuals.

3. *Whatever is predicated of a class may be predicated of all the members of the class;* and *vice versâ*, whatever is predicated of all the members of a class may be predicated of the class. This is a self-evident and necessary proposition. It is pronounced by the mind in an individual form whenever it contemplates the relation of a class and the members of the class; thus, if the general maxim be discovered or allowed, that all reptiles are cold-blooded, and the further fact be given or ascertained that the crocodile is a reptile, the conclusion is pronounced that the crocodile is cold-blooded.

The laws mentioned in this section play an important part in Logic, and have a place in the Notion, in the Judgment, and in Reasoning.

IV.

Relations of Space. — I have endeavored to show that the mind in sense-perception has a knowledge of objects as occupying space, and that round these original cognitions there gather certain native beliefs. Upon the contemplation of the objects thus apprehended, the mind is led at once and necessarily to pronounce certain judgments. They may be arranged as follows: —

1. There are all the mathematical axioms which relate to limited extension, such as, "The shortest distance between any two points is a straight line;" "Two straight lines cannot enclose a space;" "Two straight

lines which when produced the shortest possible distance are not nearer each other, will not, if produced ever so far, approach nearer each other;" "All right angles are equal to one another." Under the same head are to be placed the postulates involved in the definitions and in the propositions founded on them, such as the following, put in the form of maxims: "A straight line may be drawn from any one point to any other point;" "A straight line may be produced to any length in a straight line;" "There may be such a figure as a circle, that is, a plane figure such that all straight lines drawn from a certain point within the figure are equal to one another;" and that "A circle may be described from any centre at any distance from that centre." I shall have occasion, in speaking of the application of the principles laid down in this treatise to mathematics, to return to axioms, and shall then show that the intuitive judgments pronounced by the mind in regard to the relations of space are all individual, and that the form assumed by them in the axioms of geometry is the result of the generalization, not indeed of an outward experience, but of the individual decisions of the mind.

2. There are certain axioms in regard to motion, such as that "All motion is in space;" "All motion is from one part of space to another;" "All motion is by an object in space;" "A body in passing from one part of space to another must pass through the whole intermediate space."

3. There are the primitive truths which arise from the relation of objects to space, such as "Body occupies space;" "Body is contained in space;" "Body occupies a certain portion of space;" and thus "Body has a defined figure." But what, it may be asked, do our intuitive convictions say as to the relation of mind and space?

I am inclined to think that our intuition declares of spirit, that it must be in space. It is clear, too, that so far as mind acts on body, it must act on body as in space, say in making that body move in space. But beyond this, I am persuaded that we have no means of knowing the relation which mind and space bear to each other. As to whether spirit does or does not occupy space, this is a subject on which intuition seems to say nothing, and I suspect that experience says as little.

4. There are certain metaphysical judgments as to space, such as "Space is continuous;" "Space cannot be divided in the sense of its parts being separated;" and all those derived from the infinity of space, such as that "Space has no limits;" "Any line may be infinitely prolonged in space."

V.

The Relations of Time. — The apprehension of time is given in every exercise of memory; we remember the event as having happened in time past. Round this primary conviction there collect a number of beliefs. When time thus apprehended is contemplated by us, we are led, from the very nature of the object, to make certain affirmations and denials. It declares that "Time is continuous;" that "Time cannot be divided into separable parts;" and that "Time has no limits." The mind also declares that "Every event happens in time."

VI.

The Relations of Quantity. — These are equivalent to the relations of proportion referred to by Locke, and the relations of proportion and degree mentioned by Brown; they are the relations of less and more. The mind, in discovering them, proceeds upon the knowledge pre-

viously acquired of objects as being singulars, that is, units; it is upon a succession of units coming before it that the judgment is pronounced. It also very frequently proceeds on other relations which have been previously discovered; on perceiving, for instance, that objects resemble each other in respect of space, time, and property, we may notice that they have less or more of the common thing in respect of which they agree.

It is to this intuition I refer the power which the mind has of discovering the relation of simple numbers. I believe that one, or unity, is involved in our primary cognition of objects. Not that I think it necessary to call in a special intuition in order to our being able to count or number; but I believe that, besides the exercise of memory, and the discovery of the relations of the succession in time, there must be the general power of discovering the relations of quantity: we must be able, not only to go over the units, but further, to discover the relations of the units and of their combinations.

To this faculty I refer all those operations in which we discover equality, or difference, or proportions of any kind, in numbers. The mental capacity is greatly aided, and its intuitive perceptions are put in a position to act more readily and extensively, through the divisions and notations by tens in our modern arithmetic; every ten, every hundred, every thousand, and so on, comes to be regarded as a unit, and the judgments in regard to units are made to reach numbers indefinitely large. These numerical judgments admit of an application to extension in space. Fixing on a certain length, superficies or solid, as a unit, we form judgments which embrace lines or surfaces or solids never actually measured. I am persuaded that, even in its common or practical operations, — as, for example, in the measurement of distance by

the eye, — the mind fixes on some known and familiar length as its standard, and estimates larger space by this. Ever since Descartes conceived the method of expressing curve lines and surfaces by means of equations, mathematics may be said to be concerned with quantity as their *summum genus*. The judgments as intuitive are all individual, but they can be generalized, when they will assume such forms as the "Common Notions," so far as they relate to quantity, prefixed by Euclid to his Elements. "Things which are equal to the same thing are equal to one another;" "If equals be added to equals, the wholes are equal;" "If equals be taken from equals, the remainders are equal;" "If equals be added to unequals, the wholes are unequal;" "If equals be taken from unequals, the remainders are unequal;" "Things which are double the same thing are equal to one another;" "Things which are half the same thing are equal to one another."

VII.

Relations of Active Property. — I have been striving to prove that we cannot know either self or body acting on self, except as possessing property. On looking at the properties of objects, the mind at once pronounces certain decisions. These, like all our other intuitive judgments, have a reference, in the first instance, to the individual case presented, but may be made universal by a process of generalization. Thus, the mind declares, "This property implies a substance;" "This substance will exercise a property." The abstract truths will seldom be formally enunciated, but, as regulative principles, they underlie our common thoughts, and we proceed on them, even when entirely unaware of their nature or of their existence. Every action or manifes-

tation we intuitively regard as the action or exhibition of a something having a substantial being. On falling in with a new substance, say an aërolite just dropped from the heavens, we know not indeed what its properties are, but we are sure that it has properties, and we make an attempt to discover them.

CHAPTER III.

RELATION OF CAUSE AND EFFECT.

CAUSATION has been involved in a denser dust of discussion, especially since the days of Hume, than any other subject, except Free Will, which is intimately connected with cause and effect. There is no agreement among psychologists as to the internal conviction, nor among physicists as to the external relation. I must content myself with enunciating a few principles which are defensible and consistent with the latest discoveries of science.

I.

We have a primitive Cognition of Power. I have labored in vain if I have not shown that in all our cognition by the senses of taste, smell, hearing, and seeing, and especially by the muscular touch, we know objects as affecting us. We have a special knowledge of power in volition: we will to move our arm or to stay a thought, and the effect follows. I am to show that upon this primitive knowledge of potency our judgment as to cause and effect proceeds.

II.

Objects, Material and Mental, Act on Each Other. — There is a sense in which body is passive. An atom, if isolated from all other bodies, will continue in the state in which it is. But if brought into relationship with another body, the one body acts on the other, or rather the bodies mutually affect each other, mechanically or

chemically. Thus viewed, matter is active. The two bodies acting on each other constitute the cause; the change produced constitutes the effect. "The statement of the cause is incomplete," says J. S. Mill, "unless in some shape or other we introduce all the conditions. A man takes mercury, goes out of doors, and catches cold. We say perhaps that the cause of his taking cold was the exposure to the air. It is clear, however, that his having taken mercury may have been a necessary condition of his catching cold; and though it might consist with usage to say that the cause of his attack was exposure to air, to be accurate we ought to say that the cause was exposure to the air while under the effect of mercury." More accurately, the true cause of the effect, the cold, was not the air alone, or the body alone, but the air and the body under mercury.

There is a like joint action, a concause, in psychical or mental action. I will to move my arm and the arm moves; in the cause there is the will, but there are concurrent physiological processes without which no effect would follow. I will to detain a pleasant thought: there is a volition, but there is also the thought which is detained.

III.

There is Power in the Cause or Concause to produce the effect. We have seen that we know substances, mind and body, as having power. In causation the power is acting. The substances act according to their properties, that is, powers. A change is produced upon the substances, and this is the effect. The body A strikes the body B: this is the cause. The effect is that both A and B are affected: B is moved, and A is stayed in its motion. There has been power both in A and B, and

the power in the two is the same before and after the collision. We see the error of Hume, who makes causation mere invariable antecedence and consequence; and of J. S. Mill, who makes it unconditional sequence. It is not the invariable or unconditional succession which constitutes causation, but it is the power in the cause which produces the invariable succession.

IV.

Every effect, that is, every thing Beginning To Be, has a cause. This conviction is not the result of a wide generalization of instances. The causal belief is as strong in infancy as in mature life. It is as strong among savages as in civilized countries. It is entertained by men brought up in very different countries and situations, attached to different sects and creeds. But the circumstance which proves it to be intuitive is, that the conviction is necessary. No possible length or uniformity could or should give this necessity of conviction to the judgment. We might have seen A and B, this stone and that stone, this star and that star, this man and that man, together, a thousand, or a million, or a billion of times, and without our ever having seen them separate; but this would not and ought not to necessitate us to believe that they have been forever together, and shall be forever together, and must be forever together. No doubt it would lead us, when we fell in with the one, to look for the other, and we would wonder if the one presented itself without the other; still it is possible for us to conceive, and, on evidence being produced, to believe, that there may be the one without the other. It was long supposed that all metals are comparatively heavy, but while every one was astonished at the fact, no one prepared to deny it, when it was shown by Davy that

potassium floated on water. A very wide and uniform experience would justify a general expectation, but not a necessary conviction; and this experience is liable to be disturbed at any time by a new occurrence inconsistent with what has been previously known to us. But the belief in the connection between cause and effect is of a totally different character. We can believe that two things which have been united since creation began, may never be united again while creation lasts; but we never can be made to believe, or rather think, judge, or decide (for these are the right expressions), that a change can take place without a cause. We can believe that night and day might henceforth be disconnected, and that from and after this day or some other day there would only be perpetual day or perpetual night on the earth; but we could never be made to decide that, the causes which produced day and night being the same, there ever could be any other effect than day or night. We could believe, on sufficient evidence, that the sun might not rise on our earth to-morrow, but we never could be made to judge that, the sun and earth and all other things necessary to the sun rising on our earth abiding as they are, the luminary of day should not run his round as usual. We see at once that there is a difference between the judgment of the mind in the two cases: in the case in which we have before us a mere conjunction sanctioned by a wide and invariable induction, and that in which we have an effect and connect it with its cause. The one belief can be overcome, and should be overcome, at any time by a new and inconsistent fact coming under our observation; whereas, in regard to the other, we are confident that it never can be modified or set aside, and we feel that it ought not to be overborne.

V.

There must be an Adequacy or Sufficiency of power to produce the effect. We look not only for a cause, but for a competent cause. Experience, it is true, and experience alone, can tell us what is a sufficient cause, as it alone can inform us what is the cause. Still there seems to be an inherent conviction of the mind which leads us, in looking for a cause, to make the cause equal to the work which it accomplishes. Powers differ in kind, and they differ in degree. There is need, for instance, of more than human power to create a substance out of nothing. There is need of more than the power residing in material substance to produce thought and emotion and will. The ant which carries a seed of grain is not competent, like man, to carry a sack of corn; and the strength of man is inadequate to raise a weight which can be lifted with ease by a steam-engine. The lily can reproduce a lily after its kind, but cannot produce a pine or an oak. These facts, I am aware, can be known only by observation. But underneath all our experiential knowledge there is a necessary principle which constrains us, when we discover an effect, to look not only for a cause, but a cause with the kind of power which is fitted to produce the kind of effect, and to proportion the extent of the power to the extent of the effect. This original principle is the source of a number of most important derivative ones; as, when we have found a substance exercising a certain sort of power, we anticipate that it will always exercise the same sort of power; and when we have found it exercising a certain amount of force, we expect that it will always be fit for the same, — of course, always on the necessary conditions being furnished. Thus, having found that our minds can fol-

low a train of reasoning, we are sure that they will always be able to do so, — of course, on the supposition that the bodily organism needful to mental operation in man is not in a state of derangement. The amount of force which drives a ball a certain distance to-day, we are sure, will impel it to the same distance to-morrow. If a definite weight of oxygen has been ascertained chemically to unite with a certain definite weight of hydrogen, we are sure it will ever do so; and if we find the very same amount of oxygen not drawing to it the same amount of hydrogen, we argue that there must have been some change in the conditions of the oxygen. It is acknowledged that in such judgments there is and must be an observational element, which in spontaneous thought is ever the more prominent, — it is ever the one about which the mind is most anxious, as being the only doubtful one; still there is also a necessary principle, which is overlooked only because it is indisputable and invariable. Rising from earthly to heavenly things, we look on God, who has produced works in which are traces of such large power and admirable wisdom, as a Being possessed of power and wisdom corresponding to the effects we discover, and as capable, whenever he may see fit, of producing works distinguished by the same lofty characteristics.

VI.

I may now refer to some Defective or Erroneous Views commonly taken of Causation. Some have laid down the principle that it is like that affects like. This seems to have been the principle of Empedocles, the Sicilian philosopher, that like is only affected by like. The likeness of things enables us to put them into classes; but it contains no principle of power. Very unlike things affect each other.

We are not constrained to seek for an endless series of causes. An effect comes from a substance or substances with power. But the law of causation does not require us to go further back and seek for an endless series of causes. When we trace the production of all things to God, the self-existent, with all power in himself, the mind is satisfied. It is thus we are to meet the scepticism of Hume and the difficulty of Kant as to our being obliged to seek for a cause of God.

I have declared that while we have a native and necessary conviction, it does not announce what effect any given cause must produce, or what is the cause of any given effect. On an effect presenting itself we believe that it must have a cause, but what the cause is, is to be determined by observation and a gathered experience. It is of special importance to observe that —

Our intuitive conviction is not of the Uniformity or Continuance of the Course of Nature. This is the vague shape in which the principle appears in the works of Reid and Stewart. The former says: "God hath implanted in the human mind an original principle by which we believe and expect the continuance of the course of nature, and the continuance of those connections which we have observed in time past. Antecedent to all reasoning, we have by our constitution an anticipation that there is a fixed and steady course of nature." There is a uniformity in nature. It is formed by a number of causes being so arranged as to produce orderly results, such as the alternation of day and night and the succession of the seasons. This regularity does not proceed from mere causation. Day does not cause night, nor night day. Spring does not produce summer, nor does summer produce autumn. Every occurrence might be produced by causation without our having the

uniformity which we find in nature. To produce the order, it is needful that there be a collocation or adjustment of causes. The uniformity of nature is not a self-evident, a necessary, or universal principle of belief, which causation is.

It is a circumstance worthy of being noted, that the powerful mind of Kant, in his chase after the Unconditioned, represented by him as ideal, finds a *progressus* or a *regressus* of some kind or other in time, in space, in matter, in cause, in the possible or actual, but admits fully and explicitly that in regard to substance the reason has no ground to proceed regressively with conditions. In regard to causality we have a series of causes which go back unendingly, the unconditioned being the absolute totality of the series. But in substance there is no such *regressus*. "Was die Kategorien des realen Verhältnisses unter den Erscheinungen anlangt, so schickt sich die Kategorie der Substanz mit ihren Accidenzen nicht zu einer transcendentalen Idee, d. i. die Vernunft hat keinen Grund, in Ansehung, ihrer regressiv auf Bedingungen zu gehen" (*Kritik d. r. Vernunft*, p. 328). We have only to connect this doctrine of substance, not necessarily calling, according to the principles of reason, for a *regressus*, with his admission that substance involves power, to be able to maintain, and this without falling into any contradiction, that the effects seen in nature of a power above nature argue a substance having power, for which we are not required to seek for a cause.

Mr. J. S. Mill is successful in showing (*Logic*, Book III. Chap. xxi.) that man's belief in the uniformity of nature is the result of experience, that it is entertained only by the educated and civilized few, and that even among such it has been of slow growth. But Mr. Mill has fallen into a glaring "fallacy of confusion" in confounding our belief in causation with our belief in the uniformity of nature. The distinction was before him, at least for an instant, when, speaking of the irregularities of nature, he says: "Such phenomena were commonly, in that early stage of human knowledge, ascribed to the direct intervention of the will of some supernatural being, and therefore still to a cause. This shows the strong tendency of the human mind to ascribe every phenomenon to some cause or other." It is of this *tendency* that I affirm that it is native and irresistible. He tells us that one "accustomed to abstraction and analysis, who will fairly exert his faculties for the purpose, will, when his imagination has

once learned to entertain the notion, find no difficulty in conceiving that in some one, for instance, of the many firmaments into which sidereal astronomy now divides the universe, events may succeed one another at random, without any fixed law; nor can anything in our experience, or in our mental nature, constitute a sufficient, or indeed any, reason for believing that this is nowhere the case." This statement about fixed laws is ambiguous. If by fixed law be meant simply order and uniformity among physical events, the statement is true. But if meant to signify an event without a cause, material or mental, the statement is contradicted by our "mental nature," which impels us to seek for a cause of every event. He is right in affirming that "experience" cannot authorize such a belief, but it is just as certain that our "mental nature" constrains us to entertain it; and surely, if there be laws in physical nature, there may also be trustworthy laws in our mental nature. There is the same confusion of two different things in the following passage: "The uniformity in the succession of events, otherwise called the law of causation, must be received, not as the law of the universe, but of that portion of it only which is within the range of our means of sure observation, with a reasonable degree of extension to adjacent cases." I freely admit all this in regard to the order observable everywhere in our Cosmos; there may or may not be similar uniformity in the regions of space beyond. But our mental nature will not allow us to think, judge, or believe (these, and not "conceive," which is ambiguous, are the proper phrases), that in this our world, or in any other world, there can be an event without a cause.

It is not to my present purpose to enter on the subject of Miracles, but it does fall in with the topics discussed in the text to remark, that there is nothing in a miracle opposed to any intuition of the mind,—certainly nothing opposed to our intuition as to cause. Hume, the sceptic, takes all sorts of objections to miracles, and the evidence by which they are supported, but he does not maintain that a miracle is impossible. It is "experience," according to him, "which assures us of the laws of nature" (*Essay on Miracles*); and I hold that the same experience shows us effects in nature which constrain us, according to the intuitive law of causation, to argue a Power above nature, which power is an adequate cause of any miracle which may be attested by proper evidence. Brown has shown us very satisfactorily that a miracle, with the Divine Power as its cause, is not inconsistent with our intuitive belief in causation (*Cause and Effect*, note E). Ever since Fichte published his *Versuch einer Kritik aller*

Offenbarung, there have been persons in Germany who represent it as impossible for God to perform a miracle. This may be a necessary consequence of those false assumptions regarding our knowing only self, which landed Fichte in an incongruous pantheism, in which he at one time represents the *Ego* as the All-including God, as the "moral order;" and at another time represents God as the All, and absorbing the *Ego*. But it can plead in its behalf no principle either natural or necessary. A miracle is not in accordance with the uniformity of nature, and the Bible miracles serve their purpose as evidences, because of this; but they are in thorough accordance, as Mr. Mill admits, with the law of causation, for they claim God as their cause. The result at which we have arrived is, that the question of the occurrence of miracles is to be determined by the ordinary laws of evidence.

BOOK IV.

OUR INTUITIVE MORAL CONVICTIONS.

CHAPTER I.

THEIR GENERAL NATURE.

I.

STILL deeper interests are involved in our being able to prove that there is an immutable and eternal morality than even in showing that there is immutable and eternal truth. After having labored at such length to demonstrate that there are fundamental principles involved in the intellectual exercises of the mind, it will not be needful to take such pains to prove that there are like convictions of a moral character.

While our moral powers are not the same with the intellectual, they are in many respects analogous. We have a power of discerning truth and error; we have also a power of knowing moral good and evil. The latter is the Conscience, as the former is the Intelligence. I am not here to unfold its properties and its modes of action, as I have done in my "Psychology, the Motive Powers." Nor am I to construct a science of our moral nature, as is done in Ethics. I am simply to set forth the fundamental principles involved in Morality.

II.

The primitive moral principles take the same Three Forms as the intellectual ones. We have a moral cogni-

tion when the acts are immediately before us, and we discern at once that certain of them are good, such as benevolence, and certain of them are evil, such as malice. We have moral beliefs going beyond our immediate perceptions, as when we declare the character of Cato to be commendable, and that of Sextus to be vile. We can thus rise to the contemplation of a goodness which is eternal. We pronounce moral judgments, as when we declare that virtue deserves happiness.

III.

Our moral intuitions are to be tried by the same three tests as the intellectual, namely, self-evidence, necessity, and catholicity. We perceive at once that this daughter is good when toiling for an invalid mother. When we candidly contemplate the deed, we cannot be made to decide otherwise. We notice, thirdly, that the act meets with an approving response in every bosom.

It is of special importance to observe what is the necessity attached to these moral convictions. As every intuition has its own nature, so it has also its own kind of corresponding necessity. A necessity attached to a cognition, that there is a colored surface before my eyes, is somewhat different from the necessity to believe that space is unbounded; but there is a necessity in both when the mind contemplates the objects. So our conviction that ingratitude is a sin is different from either of these, while there is a necessity of judgment in each when the cases are fairly represented to it. The necessity covers what is involved in the intuition, neither less nor more.

CHAPTER II.

VIRTUE WITH ITS ATTACHED OBLIGATIONS.

I.

WHAT is approved of by our Moral Nature, or Conscience, is called Moral Good, or Virtue. I believe we can theoretically determine what virtue is. IT IS LOVE ACCORDING TO LAW.

In maintaining this position we must include in the love Self-Love. We are bound to love ourselves. Self-love is not merely an impulse, an instinct, it is a duty. But let us understand what we mean when we say so. We do not mean by this a love of pleasure, a love of power, a love of fame, a love of money; all these are selfish affections. The affection that is a duty is a love of ourselves as ourselves, of ourselves as God made us, with intelligence, with feeling, with conscience, moral and responsible.

It is to be a love regulated by Law. We are not at liberty to cast away ourselves, our health, our lives, our talents, our affections, our character, our purity, our influence for good. We are bound to respect, to honor ourselves, to improve ourselves, to cultivate the gifts which God has bestowed upon us, and extend our influence for good. Temperance, in the Greek and Roman senses of the term, should be to us one of the cardinal virtues: we have to restrain ourselves, our lusts and passions. We are to aim at nothing less than holiness, a separation from all evil. A self-love of this kind, that is, love regulated by law, is a virtue, and a virtue of the

highest order. But it is ever to be accompanied with a sister Virtue.

II.

It is love to Others. The standard of this is already set: we are to love our neighbors as we love ourselves. It may manifest itself in two forms: —

The Love of Complacency. We delight in the object or person beloved. It is thus that the mother clasps her infant to her bosom; thus that the sister interests herself in every movement of her little brother, and is proud of his feats; thus that the father, saying little but feeling much, follows the career of his son in the trying rivalries of the world; thus that throughout our lives, our hearts, if hearts we have, clung round the tried friends of our youth; thus that the wife would leave this world with the last look on her husband; thus that the father would depart with his sons and daughters around his couch. Love looks out for the persons beloved. The mother discovers her son in that crowd. The blacksmith

> Hears his daughter's voice,
> Singing in the village choir.

The Love of Benevolence. In this we not only delight in the contemplation and society of the persons beloved; we wish well to them, we wish them all that is good. "Therefore all things whatsoever ye would that men should do to you, do ye even so to them, for this is the law and the prophets." We will oblige them if we can; we will serve them if in our power; we will watch for opportunities of promoting their welfare; we will make sacrifices for their good. This love is ready to flow forth towards relatives and friends, towards neighbors and companions, towards all with whom we come in contact; it will go out towards the whole family of mankind. We

are ready to increase their happiness, and in the highest exercises of love to raise them in the scale of being, and to elevate them morally and spiritually.

III.

Moral Good lays an Obligation on us to attend to it. This sense, or rather conviction of obligation, is one of the peculiarities, is indeed the chief peculiarity, of our moral perceptions. Herein do our moral convictions, whether of the nature of cognitions, beliefs, or judgments, differ from the intellectual convictions which have passed under our notice in the previous parts of this treatise. That a straight line is the shortest between two points, this I am constrained to decide when my attention is called to the subject, but I know of no duty thence arising, no affection which I should thereon cherish, no action which I ought to do. But when I am led to believe that there is a good God who made me and upholds me, the mind declares that it is and must be good to love and obey that Being, and that there is an obligation lying on me to do so. This is expressed by such phrases as δέον, *duty*, *right*, *ought*, *obligation*, the convictions embodied in which cannot be accounted for on any utilitarian hypothesis. It is shown that a particular action readily within our power will tend to promote the happiness of an individual or of society; the mind's apprehension of this is one thing, and the conviction that we ought to do it is an entirely different thing, and the two should never be confounded.

But the conscience is not only a cognitive, it is a motive, power. This conviction of obligation distinguishes it at once from the other motive, as it does from the other cognitive, powers. The inducements addressed to man's sense of duty are altogether different from those ad-

dressed to the other appetencies of the mind. The love of pleasure, of fame, and of activity, do all hold out allurements to man, but none of them carries with it a binding obligation. When we follow them we have no sense of merit; when we decline them we have no sense of guilt. It is different when our moral convictions say that a particular line of conduct should be pursued. We feel now not only that we may do it, but that we should do it, and that if we neglect to do it we are guilty of sin. Hence arises the great ethical doctrine, expounded in so masterly a manner by Bishop Butler, that the conscience is supreme; that is, supreme among the other moving powers. Just as appetite craves for food, and the love of society for social intercourse, so the conscience directs to certain conduct, but with this difference, that it declares itself superior to the other springs of action. It carries with it its authority, and asserts its claims, and is prepared to denounce us if we disregard them.

IV.

The Conscience points to an Authority above itself. It is supreme as within the mind, but it is not absolutely supreme. It claims to be superior to all other motives, such as the love of pleasure, and even to the desire of intellectual improvement; indeed, it seems to point to an authority above the mind altogether. At the same time, it does not seem to announce what is the nature of the object which it would prompt us to seek after. In this respect it is like some of our intellectual intuitions, which impel us to look round for something which they do not themselves reveal. Thus, intuitive causality constrains us when we discover an effect to look for a cause, but does not specify what the cause is. In like manner our moral faculty seems to me to point to some power,

principle, or being, it says not what, above itself. It does not claim for itself that it is infallible, that it is sufficient, that it is independent. It bows to something which has authority; it acknowledges a standard which is and must be right; it looks up for sanction and guidance. It says that it ought to yield to no earthly power; but it does not affirm of itself that it can never mistake, and that there is no authority to which it should submit. On the contrary, it often finds itself in difficulty and perplexity, and feels that it should look round and up for a light, and it is sure that there is such a light. What is thus unknown to the intuition itself, but which, notwithstanding, it is ever seeking, is revealed by other processes.

V.

This obligation, when we are led to believe in a Supreme Being, takes the form of Law; and we believe that we are under Law to God. Our moral convictions do not, so it seems to me, of themselves compel us to believe in the existence of God. I am persuaded, however, that like most of our deeper intuitions (as I hope subsequently to show) they do point upwards to God. And whenever we do, by combined intuition and the obvious facts of experience, reach God, the God who gave us all our endowments, and therefore our moral constitution, the mind traces up the obligation under which it lies to him. The expression of this inward conviction now is, not that we are under obligation to an unknown power, but under law, and under law to God. It is thus indeed we get the peculiar idea of moral government and moral law, not from sense, nor from pleasure, nor from utility, but from conscience constraining us to feel obligation, and combined intuition and experi-

ence leading us to trace up that law to God as the Being who sanctions it. Till this object is reached our moral intuition is felt to be vague, indefinite; it is craving for something which it feels to be wanting: but when God is found, as he cannot fail to be found when we are in search of him, then the intuition is satisfied, and ever after connects the law with the Lawgiver.

VI.

Moral good is perceived as having Desert, as Approvable and Rewardable. This, too, is a peculiar idea, derived from the moral power in man, and cannot have been derived from, as it cannot be resolved into, any modification of pleasure, or pain, or sensation of any kind. We are convinced in regard to every good action that it is meritorious; we bestow upon it our approbation, and we look for encouragement and reward. This conviction operates with other considerations in leading us to look to God as the Governor of this world, and as ready to uphold and defend the right. There are times when our expectations on this subject are disappointed, and when we see acts of moral heroism only landing him who performs them in opprobrium and suffering. Still, even in such cases, our instincts keep firm, in spite of all appearances to the contrary; and we believe that, sooner or later, in this world or in the world to come, the deeds will meet with their appropriate reward.

The systems which represent man's moral faculty as a mere feeling or sentiment, such as those of Adam Smith, of Thomas Brown, of Sir James Mackintosh, are chargeable with two defects: *First*, the theory does not come up to the full mental facts, which embrace perception or knowledge, and judgment as well as emotion; and as a consequence, *secondly*, they make it appear as if virtue might arise from the peculiar constitution or temperament of the race.

Mr. J. S. Mill gives up Paley as an expounder of utilitarianism (*Dissertations*, Vol. II. p. 460), and allows, as to Bentham, "that there were large deficiencies and hiatuses in his scheme of human nature" (p. 462). To whom, then, are we to look, if we would examine a system which assumes such different shapes; which now takes the form of a selfish system whose principle is that every man should seek his own happiness, now the form of a benevolent system which says that a man should promote the happiness of the greatest number? In the first of these forms it is at once set aside by an appeal to our nature, and to feelings which Mr. Mill admits to be in our nature. In the second of these forms, that taken by Bentham and Mill, there is a principle of intuitive morals surreptitiously admitted, that we should look to the happiness of others as well as our own. Mr. Mill says, "The matter in debate is what *is* right, — not whether what is right ought to be done" (p. 460). This is not a full or accurate account of the matter in debate. *One* question in debate is, Can the utilitarian theory account for our conviction as to right and wrong, merit and guilt? I hold that it cannot. The higher class of utilitarians seem to trace these convictions to the association of ideas proceeding on our feelings of pleasure and pain. Thus Mr. Mill says (Vol. I. p. 137), "The idea of the pain of another is naturally painful; the idea of the pleasure of another is naturally pleasurable. From this fact in our natural constitution, all our affections, both of love and aversion, towards human beings, in so far as they are different from those we entertain towards mere inanimate objects which are pleasant or disagreeable to us, are held by the best teachers of the theory of utility to originate. In this, the unselfish part of our nature, lies a foundation, even independently of inculcation from without, for the generation of moral feelings." Let it be observed that this makes the very unselfish part of our nature stand on a selfish basis. "The idea of the pleasure of another is naturally pleasurable," that is, to ourselves. I hold that we are led to love our fellow-creatures independently of its being pleasant to ourselves; and that it is when we love them that the affection is found to be pleasant, by the appointment of the Author of our constitution, who thus prompts us to benevolence, and rewards us for cherishing it. The theory does not account for our benevolent feelings, and it fails still more when it would account for our moral convictions. I admit that it might give some explanation of certain accompaniments, but it can give no account of the conviction of "ought," "obligation," "duty," "merit," "desert," "guilt."

A *second* question in debate is, Can the utilitarian show that anything is "right"? that there is truly anything such that it "ought to be done"? Suppose some sensationalist or sceptic were to maintain, as against the utilitarian, that he was not bound to promote this happiness of the greatest number, how would the advocate of the greatest happiness principle reply to him? Consistently, he could appeal only to these personal feelings of pleasure and pain; and if he appealed to anything deeper, it must be to the very moral principle whose existence he denies. There is a *third* question in debate, which will be more easily determined after we have settled the other two. For when it is shown that man has convictions as to moral good and evil, and that these require him to do certain acts and abstain from others, we may be the better prepared to admit, as to certain of these acts, that they do not contemplate the promotion of happiness. Thus, to love God is good, and to refuse to any one his due affection and gratitude for favors seems to be evil, independently of the happiness of the creature or Creator being thereby augmented or diminished. A *fourth* question is, Does utility afford a good test and measure of virtue and vice? It is foreign to the scope of this treatise to enter on this question, but I may remark that, the ultimate appeal to "ought" and "duty" being taken away, and the appeal in the last resource being to pleasure and pain, utilitarianism will not train men to deeds of self-sacrifice, and those who have embraced it will ever be tempted to give way on great emergencies, and to yield and equivocate when they should at all hazards resist the evil. And it has been shown again and again, that it is beyond the capacity of man to foresee the results of acts, or even to discern the tendency of certain acts done in complicated circumstances. But, omitting this, it is to my present purpose to call on my readers to notice that the theory of an independent morality, and of moral conviction, admits and embraces all that is true in utilitarianism. It affirms that we *ought* to promote the greatest happiness of the greatest number; and in regard to all questions bearing on happiness, the conscience requires us to weigh consequences, and to look to long issues and results.

CHAPTER III.

ERROR AND SIN.

I.

Our academic moralists are commonly averse to look at or consider these two topics. But if there be truth in our world, there is also error; if there be good, there is also evil. Those who profess to expound our nature must look at the one alternative as well as the other. Nor let it be said, with Augustine, that sin is a mere negation. Malice and deceit and adultery are as much realities as goodwill, integrity, and purity.

I have been arguing that our intellectual and moral intuitions are all necessary and universal. This doctrine, however, must not be so stated as to imply that it is impossible for man to fall into error, or for the conscience to come to a false decision, or for human beings to commit sin.

That men do, in fact, fall into error, is evident from this single circumstance, that scarcely two persons can be brought to accord in opinion, even on points of importance. In regard, indeed, to necessary truths, there are certain restrictions laid on the mind. No man who considers the subject can be made to believe that two straight lines will enclose a space. Still, even in regard to such truths, the mind has a capacity of ignorance and of error; it may refuse to consider them, or, mistaking their nature, it may make statements inconsistent with them without knowing it. Those who have gone through the demonstrations of Euclid are constrained to believe

the truth of every proposition, but the truths have never so much as been presented to the minds of the great majority of mankind, and many persons might easily be persuaded that the angles of certain triangles are equal to less or to more than two right angles. But whatever the restrictions laid on our liability to error in necessary truth, there seem to be no limits to man's exposure to mistakes in other matters. There is boundless room for them in all conclusions which are dependent on experiential evidence, especially when the proof is of a cumulative character. In all such matters the mind may refuse to look at the probation, or it may take only what is favorable to one side, and may arrive at most erroneous and preposterous results. This liability to error is apt to appear in all affairs in which we are under the influence of pride or party spirit, or a biassed and prejudiced disposition; in short, wherever there is moral evil swaying the will, and leading it to look on evidence in a partial spirit. If I were immediately cognizant of the heart of a good man, and could see the springs that move him to benevolence and self-sacrifice, I should be constrained to approve of him; but I may be prepossessed against him, and I twist and torture facts till I bring myself to believe that he is doing all this from a deep designing selfishness. I believe that while ignorance may arise from the finite nature of our faculties, and from a limited means of knowledge, positive error does in every case proceed directly or indirectly from a corrupted will, leading us to pronounce a hasty judgment without evidence, or to seek partial evidence on the side to which our inclinations lean. A thoroughly pure and candid will would, in my opinion, preserve man, even with his present limited faculties, not indeed from ignorance on many points, but from all possibility of positive mistakes.

But the question may be asked, how is the existence of sin, and of wrong decisions of the conscience, consistent with the necessity which attaches to our moral convictions? The difficulty can easily be removed so far as the existence of sin is concerned; for sin must ever proceed from the region of the will, which is free to do good, but also free to do evil. It may be necessary for the conscience to decide in a certain manner, but it is not necessary that the will should do what the conscience commands. And it is to the influence exercised by a disobedient will upon the conscience that I attribute all the errors in its decisions. In whatever way we may reconcile them, these two facts can each be established on abundant evidence: the one, that in the primitive exercises of conscience there is a conviction of necessity; the other, that the conscience is liable to manifold perversions. Care must be taken not to state the two so as to make the one appear to be inconsistent with the other; both can be so enunciated as to make all seeming contradiction vanish. If we look directly and fairly at moral excellence, the mind must declare it to be good. But then, first, the mind may refuse to look at it at all; and, secondly, it may not regard it in the right light. If we look upon the living and the true God in the proper aspect, we must acknowledge that we owe him love and obedience; but then we may refuse to look upon him, we may contrive to live without God, and God may not be in all our thoughts; or we may fashion to ourselves a Deity with a degraded nature, making him one altogether like unto ourselves, and then the proper awe and affection will no longer rise in our bosoms.

It is to be taken into account that, while our decisions upon the acts presented may be intuitively certain, yet that the acts are not intuitively presented, and may be

very inaccurately presented. The conscience, it is to be remembered, is a reflex faculty, judging of objects presented to it by the other powers, and the representation given it may be incorrect. The liability to deception and perversion is increased by the circumstance that the states of mind with which our voluntary acts are mixed up are of a very complicated character. There is room in this way for giving a wrong account of our actual state of mind at any given moment. I contribute a sum of money to relieve a person in distress; I may do so from very mixed or doubtful motives; but I am naturally led by self-love to look on the motive as good, and then I cherish a feeling of self-approbation, in which I should by no means have been justified had I taken a searching view of the whole mental state. Again, I find a neighbor doing the very same act, and I am led by jealousy to attribute selfish motives to him, and I condemn him in a judgment which may be equally unwarranted. By such seductions as these the mind may become utterly perverted in the representations which it gives or receives, and in the consequent moral judgments which it pronounces. In the case of these perversions of the conscience, as in the case of the errors of the understanding (as we have previously seen), the evil is to be traced to the will refusing to give obedience to its proper law, and conjuring up a series of deceptions to excuse and defend itself. The intuition is after all there, but it is difficult in a mind perverted by a corrupt and prejudiced will to put it in a position to act aright. In order to do this it may be needful to have a divine law revealed, and this applied by a teaching and quickening Spirit from above.

II.

We are already in the heart of the subject of Sin, a topic which academic moralists studiously avoid, but which must be carefully looked at by those who would give a correct account of our moral constitution. In referring to it here, I do not profess to be able to give an explanation of the origin of sin under the government of God, whose power is almighty, and who shows that he hates sin. This seems to be a mystery which human reason cannot clear up. The topic certainly does not fall within the scope of our present investigation. I have here simply to consider sin in its reference to our moral convictions.

Sin is a quality of Voluntary acts. It always resides in some mental affection or act in which there is the exercise of freewill. The guilt of the sin thus always lies with him who commits it. He cannot throw the blame on any other, for he has himself given his consent to it. Others may have seduced him into it, and in that case the criminality of having tempted him lies with them; and then the sin of having yielded to the temptation, and having done the wicked deed, lies with himself: he can devolve it on no other.

Our moral convictions declare that sin is of evil Desert, Condemnable, Punishable. This conviction is of precisely an opposite character to that which we entertain in regard to good affection and action. We declare the sin to have in itself evil desert; we condemn it in consequence, and we say of it, that it should be discouraged, nay, punished. The very ideas, so full of meaning, involved in these mental convictions, are native, original, and necessary. We cannot get them from mere sensations of pleasure or pain, nor from any intellectual opera-

tion whatever; and yet we are constrained to take this view of sin wherever it is pressed fairly upon our notice. It is this conviction that stirs up and keeps alive a sense of guilt and apprehension of punishment in the breast of every sinner. It is found even among children, and among the rudest and most ignorant savages, who are urged thereby to try some means of avoiding or averting the wrath of God, and are prepared in consequence to listen to the parent, or teacher, or missionary, when he speaks of the desert of sin, and points to a Saviour who suffered in our room and stead, and so made reconciliation for transgressors.

CHAPTER IV.

THE WILL.

PRIMITIVE TRUTH INVOLVED IN WILL.

I.

WILL has a much larger place in the mind than is commonly allotted. I believe it is exercised in nearly every minute of our waking life, say in guiding our steps as we walk, or in keeping us in the proper position while we sit, or in cherishing wishes or regulating our thoughts. Its essential element is Choice, or the opposite of choice, Rejection. It takes a variety of forms.

One of its first is Attention. We detain a present state of mind. We keep before us, for a time, an object in which we are interested. This is an important power, as, in retaining the thought, feeling, or object, we may call up all that is associated with it in a lengthened train, or collected in a centre round self. Chalmers speaks of attention as a link between the intellectual and the moral.

Will may rise to a higher form; it may become a Wish: we wish to gain an object or an end, or to be delivered from it. Our wishes or voluntary aversions constitute a large portion of our conscious experience from hour to hour, almost from minute to minute. They are our longings and aversions, our adherences and our antipathies. In the selfish man they become a brooding over successes or reverses; in the kindly inclined man they dwell on the happiness or successes of others. They constitute a large portion of the aspira-

tions of the religious man, as breathing for instance in the Psalms: "Oh that I knew where I could find Him!"

Will takes its highest shape in Volition, or the determination towards which it is always tending, and in which it terminates when circumstances admit. Volition starts all our undertakings, and is needful to their execution. A strong will is the original of all great deeds, good or evil; it produces the hero and the powerful villain.

The Will in these three forms has its place in all the virtues and in all the graces; without this they would not be moral. In benevolence we wish well to our neighbors, singly or collectively. In religion faith becomes trust, and repentance the turning from sin unto God.

II.

Moral Good and Evil lie in the region of the Will; Will being viewed in the large sense explained. In every act which is, properly speaking, moral or immoral, there is an element of choice under some or other of the forms which it takes. It is in acts or affections which we are free to perform, but from which we are free to abstain, that the conscience discerns a moral quality, and on which it pronounces its sentence. There is choice, and therefore will, in all cases in which we adopt or reject any proposal laid before us by ourselves or others, as there is also in our wishes and voluntary aversions. The fondlings, resolutions and rejections may unite themselves with any of our feelings, and even with our intellectual exercises, and make them in a sense voluntary.

III.

The Will is Free. In saying so I mean to assert, not

that it is free to act as it pleases, which is not universally true, for the will may be hindered from action, as when I will to move my arm, and it is not obeyed because of paralysis or physical restraint: I claim for it an anterior and a higher power, a power in the mind to choose, and, when it chooses, a consciousness that it might choose otherwise. This truth is revealed to us by the inward sense, and is not to be set aside by any other truth whatsoever. It is a first truth, equal to the highest, to no one of which it will ever yield. It cannot be set aside by any other truth, not even by any other first truth, and certainly by no derived truth. Whatever other proposition is true, this is true also, that man has free-will. If there be any other truth apparently inconsistent with it, care must be taken so to express it that it may not be really contradictory. It is a truth which may be expressed in words; it is so expressed when it is said that the mind has in itself the power of choice. It is the office of the psychologist and the moralist to endeavor to determine exactly what is involved in this. But this is to be done, after all, mainly by an appeal to consciousness.

So much is clear, so very clear that any attempts to make it clearer by discussion will only stir up mud and trouble the waters. The difficulties which encompass the subject do not originate in Freewill itself, but in its connection with two other truths. First, there is the Divine Foreknowledge and Sovereignty, doctrines which recommend themselves to high reason, and which are decisively written in the Word of God. Secondly, there is the appearance of causation in the mind, even in its voluntary acts. When we know a man's character we can anticipate what he will do in certain circumstances; of the man of integrity, that he will not tell a lie. Statis-

tics of criminal acts depending on freewill can be drawn out as certain as those of mortality depending on physical causes. The statistician can tell us approximately how many thefts and murders will be committed in a year in a given district, just as he can predict how many deaths there will be, and so far as he fails, in either case, it is from a want of knowledge.

I do not profess to be able to clear up the difficulty arising from causation on the one side facing freewill on the other. Perhaps the safest course is to affirm that we are obliged to believe in both, and that it cannot be proven that there is a contradiction between them when they are properly expounded. Here as in so many cases we have to believe in truths of which we do not see the full meaning, and to believe that two propositions may be true while we cannot discover the reconciliation, if indeed a reconciliation is needed. I may call attention to two circumstances which may somewhat lessen the perplexities.

First, causation is not all of one kind. Cause may act in a different way upon our will from that in which it acts in other departments of our nature. The mind has undoubtedly a power of freewill. But consciousness, which is always of the present, cannot tell what circumstances antecedent have swayed the will or how. The antecedents do not operate as causes operate in physical nature, or in our intellectual being. It can be shown that cause in mind is of a different nature from cause in matter. It is conceivable that in the peculiar nature of cause, as operating on or in the will, may be found the means of removing the mystery. We know where the secret lies, though we may not be able to find it.

Secondly, causation, always with power, seems here, as in a number of other cases, to be of a duplex or complex

character. We have seen that in all physical and in all mental causes there are two or more agents. So in voluntary action there are two antecedents: there is the Motive and there is the Will. Their concurrence is necessary to the product.

It is necessary here to ascertain definitely what a Motive is. It is something addressed to the will prior to its action. It differs in the case of different individuals and of the same man at different times. I have known a tradesman who at one part of his life could not pass a tavern without being tempted to enter and seek excitement in intoxicating drink. To another tradesman the house presented no such allurement, and it ceased to present any temptation to the first man when he had succeeded in conquering his evil habit. A motive is in the mind prior to action, and alluring to a certain action. It may consist partly of some external circumstance; it has always an accompanying mental appetence, say the love of pleasure, of renown, or of money. This appetence may be a natural inclination, or it may be the result of a course of action, say our habits, at every step in the formation of which there may have been acts of the will for all of which the individual was responsible at the time. What in the end presents itself to the Will before action is the Motive. The Motive has no compelling power. The Will, or rather the mind in the exercise of Will, is free. It is free to choose, it is free to reject. No action takes place till the will chooses. When it accepts or rejects, it sanctions the motive. For this it is responsible.

IV.

The Will is Responsible for all its acts of choice or rejection, be they volitions or be they acts of attention or wishes. We have seen that our moral nature points to a power above itself, a power which has authority; it

should bow to that authority; it must give account of itself to that power. When God is revealed by his works without or within us, then we are constrained to believe that we are under law to God. So then every one must give account of himself to God. Thus far the philosophy of intuition carries us. I am not convinced that it goes farther. I am not sure that it proves to us that there is and must be a judgment day, but it prompts us to look out for it, and furnishes a presumption in its favor.

A different method of reconciling freedom with causation has been introduced by Kant, who has been followed by a long train of theologians and metaphysicians. According to this view, the mind knows only phenomena, and not things, and the law of cause and effect is a mental framework giving a form to our knowledge of phenomena. It applies, therefore, to appearances and not to things, which, for aught we know, or can know in this world, may or may not obey the law of causation. Kant acknowledges that we are led by the speculative principles of the mind to look on even the will as under the dominion of cause, but then it is quite conceivable that the thing itself may after all be free, and we are led to believe it to be free by the Practical Reason. Now, I have to remark, first of all, on this theory, that it must be taken in its entirety. We are not at liberty (as some would do) to adopt it merely so far as it may suit our purpose, and refuse the very foundation on which it is built. We must, in particular, admit as a fundamental principle that we can never know things; that causation has no respect whatever to things, but is a mere subjective principle of the mind; that we cannot prove the existence of God from causation. But I have failed in one of the main ends of this treatise if I have not succeeded in showing that the mind has knowledge of things in its primary exercises, that we know objects as having potency, and that the law of cause and effect refers to such objects. If we deny this, we are denying certain of the intuitions of the mind in some of their clearest enunciations; and if we deny them in one of their declarations, why not in others? and if we deny one set, why not every other set? till at last we know not what to believe and what to disbelieve. Those who believe that the mind can come to the knowledge of things, and that they discover power in things, cannot resort to this theory.

CHAPTER V.

RELATION OF MORAL GOOD AND HAPPINESS.

THESE two have a number of points of connection and correspondence. Much of moral good consists in the voluntary promotion of happiness, and the diminution of pain in a world in which there is such a liability to suffering. A very large number of human virtues, and of vices, too, take their origin from man's capacity of pleasure and pain; and in a state of things in which there was no possibility of increasing felicity, or removing misery, many of this world's virtues would altogether disappear. Still the two, while they have many interesting points of affinity, are not to be identified. In particular, we are not to resolve virtue into a mere tendency to promote the pleasure of the individual or happiness of the race. There seem to me to be certain great truths which the mind perceives at once in regard to the connection of the two.

I.

The good is good altogether independent of the pleasure it may bring. There is a good which does not immediately contemplate the production of happiness. Such, for example, are love to God, the glorifying of God, and the hallowing of his name: these have no respect, in our entertaining and cherishing them, to an augmentation of the Divine felicity. No doubt such an act or spirit may, by reflection of light, tend to brighten our own felicity; but this is an indirect effect, which follows only where we cherish the temper and perform the

corresponding work in the idea that it is right. We do deeds of justice to the distant, to the departed, and the dead, who never may be conscious of what we have performed. Even in regard to services done with the view of promoting the happiness of the individual, or of the community, we are made to feel that, if happiness be good, the benevolence which leads us to seek the happiness of others is still better, is alone morally good. In all cases the conscience constrains us to decide that virtue is good, whether it does or does not contemplate the production of pleasure.

II.

Our moral constitution declares that we ought to promote the happiness of all who are susceptible of happiness. The only plausible form of the utilitarian theory of morals is that elaborated by Bentham, who says that we ought to promote the greatest happiness of the greatest number. But why *ought* we to do so? Whence get we the *should*, the *obligation*, the *duty?* Why should I seek the happiness of any other being than myself? why the happiness of a great number, or of the greatest number? why the happiness even of any one individual beyond the unit of self? If the advocates of the "greatest happiness" principle will only answer this question thoroughly, they must call in a moral principle, or take refuge in a system against which our whole nature rebels, in a theory which says that we are not required to do more than look after our own gratifications. The very advocates of the greatest happiness theory are thus constrained, in consistency with their view, to call in an ethical principle, and this will be found, if they examine it, to require more from man than that he should further the felicity of others. But while it covers vastly more ground, it certainly includes this, that we are bound, as

much as in us lies, to promote the welfare of all who are capable of having their misery alleviated or their felicity enhanced.

III.

Our moral convictions affirm that moral good should meet with happiness. They seem to declare that this is in itself appropriate and good; and when we are led to believe in the existence of a good God, we are sure that he will seek to secure this end. Experience, no doubt, shows many things in seeming opposition to this, shows many crushed with misfortune and wrung with agony, who are far more virtuous than those who are in the enjoyment of health and prosperity. But our inward convictions guide us to the right conclusions in spite of these apparently contradictory results of outward observation. They lead us to believe that they who are thus afflicted are after all suffering no injustice, inasmuch as they have sinned against Heaven, and to expect that the wicked will not be allowed to pass unpunished. And since we do not discover a full retribution in this world, they lead us to look forward to a day of judgment, in which all the inequalities and seeming incongruities of this present dispensation will be rectified in appearance as well as in reality, and the justice of God's moral government fully vindicated.

IV.

Our moral convictions declare that sin merits pain as a punishment. There seems to be as close a connection between sin and pain as there is between virtue and happiness. There may indeed be happiness, and there may be suffering, where there is neither virtue nor the opposite, as, for example, among the brute creation; but we decide that, wherever there is virtue, it merits hap-

piness, and wherever there is sin, that it deserves suffering, and we are led to anticipate that the proper consequences will follow under the government of a good and a holy God. This conviction keeps alive, in the breasts of the wicked, at least an occasional fear of punishment, even in the midst of the greatest outward prosperity, and points very emphatically, if not very distinctly, to a day of judgment and of righteous retribution. But as this instinct does not supply the object, it is quite possible that a wrong one may be presented by the baser fears of the heart, or by a degraded superstition, and the final judgment may be thought of as a petty assize, and the judge be regarded as gratifying a personal revenge, and heaven be contemplated as an elysium of sensual joys, and hell as a place of vulgar torture. Still the conviction does demand its object, and when the moral sense is refined, it feels that the account given in Scripture of a judgment day, and of a heaven of light and a hell of darkness, is in thorough correspondence with the intuition which God has planted in our mental constitution.

But in contemplating and in harmonizing such truths as these, Ethical science finds itself in difficulties: it starts questions which it cannot answer; it raises doubts which it cannot dispel. We see, on the one hand, that God will be led to punish sin, that he "will by no means clear the guilty." But we have evidence, on the other hand, that he delights supremely in the happiness of his creatures. How then can God be just, and yet the justifier of the ungodly? Natural Ethics here conduct to a yawning chasm, but show no bridge across; while we are led most anxiously to long for one, and almost to expect that one will appear. They lead us to a place where we have no light, but where we are led to

cry out for a light because of the very thickness of the darkness. How grateful should we be when a light is vouchsafed from heaven to show us that the gulf is spanned, and to disclose the way by which it may be crossed!

PART THIRD.

INTUITIVE PRINCIPLES AND THE SCIENCES.

BOOK I.

METAPHYSICS.

CHAPTER I.

THE SCIENCE DEFINED.

THE phrase Metaphysics is believed to have taken its rise from the title given to one of the treatises of Aristotle. There is no reason to think that the name was given to the work referred to by the author. It does not even appear that it was meant to denote the nature of the contents. Andronicus, it is said, inscribed on the manuscripts, Τὰ μετὰ τὰ Φυσικά, to intimate that these books were to follow the physical treatises.[1] In the writings of Aristotle this department is called, not Metaphysics, but the First Philosophy.

Metaphysical speculation is usually supposed, and I believe correctly, to have originated with the Eleatics, who flourished 450 or 500 years before our era. Separating from the physiologists, that is, physical speculators,

[1] On the title, see Bonitz, "Commentarius," appended to his edition of the *Metaphysics*. See, also, M'Mahon's translation of the *Metaphysics*, p. 1, where Clement Alexandrinus and Philoponus are quoted as understanding the phrase to denote the supranatural.

of the Ionian school, they directed their attention to the dicta of inward reason. Going far below what they represented as the illusions of the senses, they sought to penetrate the mystery of being. With them all things were one, and this incapable of motion or of change.

Metaphysics are treated, along with all other topics, by Plato, under the somewhat unfortunate name of Dialectics, which has nearly the same meaning as Speculative Philosophy has in modern times, only the former meant discussion in conversation, the latter discussion in the head, or in books. According to Plato, it was the science which treated of the one Real Being (τὸ ὄν) and the Real Good. This one Real Being was not with him, as with the Eleatics, inconsistent with the existence of the many. It embraced the inquiry into the nature of the Good and the Beautiful, and expounded the Eternal Ideas which had been in or before the Divine Mind from all eternity, to the contemplation of which man's soul could rise by cogitation, because it had been formed in the Divine image, and in which the sensible universe participated, thereby having a stability in the midst of its mutability.

According to Aristotle, the First Philosophy treats of entity so far forth as it is entity, and of quiddity or the nature of a thing, and of that which is universally inherent, so far as it is in entity. He argues that if there were not some substance (οὐσία) other than those that exist in nature, then Physics would be the first science; but if there be an eternal and unmovable substance, then there must be a prior science to treat of it, and this is to be honored as the first and highest philosophy. But the inquiry into entity is, in fact, an inquiry into causes, or what makes a thing to be what it is; and he shows that such an investigation conducts to four causes: (1.) The

Formal (*τὴν οὐσίαν καὶ τό τι ἦν εἶναι*); (2.) The Material (*τὴν ὕλην καὶ τὸ ὑποκειμένον*); (3.) The Efficient (*ὅθεν ἡ ἀρχὴ τῆς κινήσεως*); (4.) The Final (*τὸ οὗ ἕνεκεν καὶ τὸ ἀγαθόν*).[1]

From the bent of his genius, Bacon was no way addicted to Metaphysics, but he allots it a separate and a most important place. He says that Physics regard what is wholly immersed in matter and movable, supposing only existence and natural necessity; whereas Metaphysics regard what is more abstracted and fixed, and suppose also mind and idea. To be more particular, he represents Physics as inquiring into the efficient and material cause, and Metaphysics into the formal and final.[2]

The two largest metaphysical treatises of Descartes are entitled *Meditations on the First Philosophy* and *Principles of Philosophy*. He says that the first part of philosophy is "Metaphysics, in which are contained the principles of knowledge, among which are found the explication of the principal attributes of God, of the immateriality of the soul, and of all the clear and simple notions that are in us." He represents Philosophy as a tree, of which Metaphysics is the root, Physics the trunk, and all the other sciences the branches that grow out of this trunk.[3]

In the Wolfian School, which proposed to systematize the scattered philosophy of Leibnitz, Metaphysics was asked to deal with three grand topics, — God, the World, and the Soul, — and should aim to construct a Rational Theology, a Rational Physics, and a Rational Psychol-

[1] *Metaph.*, B. I. c. iii. sec. 1, compared with B. III. c. i., and B. V. c. i. sect. 3.

[2] *De Augmentis*, iii. 4.

[3] *Prin. Phil.* Epis. Auth.

ogy. Kant takes up this view of Metaphysics, but labors to show that the speculative reason cannot construct any one of these three sciences. The only available metaphysics, according to him, is a Criticism of the Reason, unfolding its a priori elements. He arrives at the conclusion that all the operations of the Speculative Reason are mere subjective exercises, which imply no objective reality, and admit of no application to things; and he saves himself from scepticism by a criticism of the Practical Reason, which guarantees the existence of God, Freedom, and Immortality.[1]

In the schools which ramified from Kant, Metaphysics is represented as being a systematic search after the Absolute, — after Absolute Being, its nature, and its method of development.

And what are we to make of Metaphysics in our day? It is clear that she has lost, and I suspect forever, the position once allowed her, when she stood at the head of all secular knowledge, and claimed to be equal, or all but equal, in rank, to Theology herself. "Time was," says Kant,[2] "when she was the queen of all the sciences; and if we take the will for the deed, she certainly deserves, so far as regards the high importance of her object-matter, this title of honor. Now it is the fashion to heap contempt and scorn upon her, and the matron mourns, forlorn and forsaken, like Hecuba." Some seem inclined to treat her very much as they treat those *de jure* sovereigns wandering over Europe, whom no country will take as *de facto* sovereigns, that is, they give her all outward honor, but no authority. Others are prepared to set aside her claims very summarily. The multitudes who set value on nothing but what can be counted in

[1] See Methodenlehre, in *Kr. d. r. Vern.*

[2] *Kritik*, translated by Meiklejohn, p. xvii.

money, never allow themselves to speak of metaphysics except with a sneer. The ever-increasing number of persons who read, but who are indisposed to think, complain that philosophy is not so interesting as the new novel, or the pictorial history, which is quite as exciting and quite as untrue as the novel. The physicist who has kept a register of the heat of the atmosphere at nine o'clock in the morning for the last five years, and the naturalist who has discovered a plant or insect distinguished from all hitherto known species by an additional spot, cannot conceal their contempt for a department of inquiry which deals with objects which cannot be seen nor handled, weighed nor measured.

In the face of all this scorn I boldly affirm that Metaphysics are not exploded, and that they never will be exploded. But if they are to keep or regain a place in this country, they must submit to lower their pretensions, and secure that the performance be in some measure equal to the profession made. In particular, they must confine themselves to a field which is open to human investigation, and which can be overtaken. Looking to the philosophies to which I have just been referring, we see that some have ascribed to it far too wide a province, allotting to it inquiries which in modern times have been happily distributed, owing to the advance in the division of labor, to a great number of sciences. I have allotted to it a defined province. It is not the science of all truth. It is the science of a special department. It is the science of First and Fundamental Truth. Sometimes it has to look more to the subjective side or knowing powers, when it may be called Gnosiology ; at other times to the objective side or the objects known, when it may be called Ontology.

CHAPTER II.

FUNDAMENTAL TRUTH AND EVOLUTION.

I.

THROUGHOUT this work I have been laboring to find out what first truths are, to ascertain their laws and arrange them into a system. In doing this I have carefully avoided the inquiry as to how they have been produced. To determine what they are, how they operate, and the objects which they look at, is a most important investigation independently altogether of their origin. It can be shown that it is only by inspecting their nature and exercises that we can discover whence they have come. It is alleged that they may have been formed by evolution. But we cannot inspect development directly as it runs on through long ages. We can infer that there has been such a process only by a study of the effects which it is supposed they have produced. The most powerful speculative speculator of our day argues that our fundamental laws have been formed by evolution.

II.

The school of Locke maintains that all our knowledge and ideas have been derived from experience. The school of Kant holds that we have a priori ideas; that is, ideas prior to experience. Mr. Herbert Spencer has made a bold attempt to reconcile the two schools.

Hitherto the school of Locke, specially represented by the two Mills, father and son, have been laboriously

trying to show that all our ideas are got from the experience of the individual. But it was felt all along by many that the effort was a strained one. In my earlier life as an author, I spent much time in exposing the weakness of the theory. There are cognitions and beliefs which spring up spontaneously, which are entertained by all men, young and old, savage and civilized, and which carry in them and with them a conviction of necessity; such, for example, is the belief in the principle that every effect has a cause. All men act upon it. No man can be made to believe otherwise. Such are the convictions that honesty and benevolence are good, are obligatory, are commendable; and that deceit, hypocrisy, and cruelty are evil, to be avoided, and condemnable. But it is difficult to see how people of all times and of all countries could be led to hold these beliefs if founded only on the short experience of the individual, and still more difficult to account for the necessity in the conviction. So this theory has been abandoned. I know no deep thinker who now holds it.

III.

The new theory is, that these truths, which profound thinkers regard as a priori, are derived from the experience of the race and are formed by evolution. It is allowed, as in the former theory, that they are the result of experience. But the experience began in the lowest of the lower animals, and has come down from the monad through the mollusk, the mammal, and the monkey to man. It has become so massed and compacted that now it is necessary. Hence Spencer's postulate and test, that the belief has become a necessity of which the negative is inconceivable.

This theory runs as a thread through each of Mr.

Spencer's dozen volumes. He argues that there is an object which is related to a subject. The object affects the subject. With Mr. Spencer, the subject affected is the nervous organism. The external object affects it, and thus generates the experience. The internal subject, being the nervous system, is psychical, what is commonly termed mind or soul. When two things come together in our experience, there is a tendency, when the one comes up, to expect the other. "When any two psychical states occur in immediate succession, an effect is produced such that, if the first subsequently occurs, there is a certain tendency for the second to follow it" (*Psych.* Vol. I. p. 425). When they come together frequently, the expectation is intensified. When they come together invariably, it becomes so confirmed that we cannot even conceive the contrary. Cause and effect have come together invariably (how have they done so except by some power in the cause?), and so we cannot conceive the one without the other. Thus are fashioned forms of intuition which are the à priori forms of Kant and the Germans. Being fashioned in the nervous structure, they go down by heredity. Every infant born is in possession of them. Mr. Spencer thus departs and separates from the ordinary experience school. Every one has something native and necessary. The whole is the accumulated experience of humanity. It is a process of the nerves and brain which are so organized as to be compelled to think in one particular way, and cannot be made to think or to act in any other way.

IV.

We are not required to review this theory as a whole; we have to consider it merely in its bearing on fundamental truth. Two questions are started: Can the pro-

duction of first truths be explained by evolution? If so, is their authority thereby undermined? I begin with answering the second question, and this will place us in a position candidly to consider the first.

If our intuitions have been developed, can we put trust in what they reveal? I answer that this depends on the nature of the development. We can conceive a development incapable of establishing truth. This would be the case if the evolution were merely mechanical, a mere material evolution. It would also be so if the evolution were merely one of nerves and their currents, as Mr. Spencer maintains.

But there may be a development, a development of soul, which carries truth with it and reveals it.

It has been shown again and again that the existence of evolution does not interfere with the argument for the existence of God. Professor Huxley declares that the doctrine of development does not undermine the doctrine of final cause. He allows that there is as clear and decisive proof of apparent design in these works of nature, on the supposition that they are evolved in the course of ages, as on the supposition that they may have been created immediately by God. Before the doctrine of development was published, people generally thought that there is proof of design in nature. This has not been weakened but rather strengthened by these late discoveries of the prevalence of evolution, as we can now discover fitness and wisdom not only in the objects themselves, say plants and animals, but in the way in which they have been evolved, and a connection thereby formed between the present and the past, between the children and their parents.

Because a thing has come into existence by evolution, this does not alter its true nature, nor the view which

we take of it, nor the use to which we turn it. Because the bread on our table was evolved from the corn growing on the ground, and this from a cereal which appeared in the geological ages, we do not therefore decline to eat it. When a hungry man sees a piece of beef he will not turn away from it because it has been the flesh of a cow which has descended from an antediluvian ungulate. I believe in the reality of these mountains and stars even when it has been shown that they have been formed out of star-dust. I use the eye quite as readily as before, even when told by Darwin that it was formed thousands of ages ago from a sensitive spot in the brain. Aristotle's analysis of the reasoning process will remain true, even though it should be shown that his intellect was inherited from a savage or even from a brute ancestor.

The fact is that among the gifts derived from development may be man's knowing powers, which are constantly enlarging. From inheritance he has got a power of intelligence which makes him know things and their wide relations. A man of fifty has gone through a longer process than a boy of five, and therefore has greater knowledge and a greater capacity of knowledge. The present civilized race of men is more enlightened than their remote ancestors, just because there has been a longer process of guided evolution.

We do not feel the less gratitude for gifts because they have come to us by a more or less lengthened passage. Carlyle did not value less the much-prized complimentary gift of Goethe because it came through a transporting medium. The son does not put a lower estimate on his patrimony because the father earned it for him by much toil and privation.

V.

We are now in a position, secondly, to inquire without fear or prejudice whether these fundamental principles have been evolved.

I have shown in another work that evolution is a manifestation of the deeper and wider law of cause and effect. It is an organized causation. A number of agencies combine; they act according to their properties, and evolution takes place, seen for instance in the plant growing from the seed, and the animal from the germ. But there are limits to the sphere both of causation and consequent development. A cause can give only what it has got. The stream of evolution cannot rise higher than its fountain. If the waters are raised higher, it must be by a power without and above the stream.

It is a firmly established law that *there is nothing in the effect which was not potentially in the cause.* The organized powers develop according to the powers or properties which they possess. But it does look as if new powers have been produced in the ages, powers not in the original atoms or molecules from which it is supposed all things have come. It might be difficult to determine whether these new powers come in by direct creation, or by a providential arrangement of the previously created agencies. There were long geological ages in which there was no Life. But we have no proof that the inanimate can produce the animate. There was therefore a new power superinduced when life came forth. There were ages before Sensation was experienced, and there was a new epoch when the first pleasure and pain were felt. There may have been a long period before Instinct was added for the preserva-

tion of the living creature, and when this was done we have a farther era. Instinct acts blindly, but at the fit time there is Intelligence which perceives the meaning of the act, and knowingly uses means to accomplish ends; and a new age has arrived. Morality comes in, it may be, at the same time, and consummates the work. It thus looks as if the history of our earth develops in epochs, corresponding to the days of Genesis. If so, we may reasonably conclude that these fundamental laws or powers of intuition, not found in the lower animals, appear in the last day or period when man comes on the stage, and are in his very nature and constitution.

Our subject does not require us to determine how far development extends. Enough has been advanced to show that evolution, be it in one continuous stream or with accessions from above, does not undermine or lower the authority of fundamental truths.

BOOK II.

GNOSIOLOGY.

CHAPTER I.

THE ORIGIN OF OUR KNOWLEDGE AND IDEAS.

WHAT is Science (Ἐπιστήμη)? is the question put by Socrates in Plato's subtle dialogue of *Theatetus*. But the word "science" has two meanings. In one sense it can be defined. It is knowledge arranged, correlated, or systematized. In this sense we speak of astronomy, geology, logic, and other sciences. But the word had, at least in Greek, another signification, and meant simply knowledge; and we may suppose the question to be put, What is Knowledge? To this the reply must be, that we cannot positively define knowledge, so as to make it intelligible to one who did not know it otherwise. Still we can, by analysis, separate it from other things with which it is associated, — such as sensations, emotions, and fancies, — and make it stand out distinctly to the view of those who are already conscious of it. The science which thus unfolds the nature of knowledge may be called Gnosiology, or Gnosilogy (from γνῶσις and λόγος). I prefer this to Epistemology, which would signify the science of arranged knowledge. This science should be prosecuted in the same method as every other which has to do with facts, that is, the Inductive.

We must now enter upon the inquiries in which Locke and five or six friends, who met in his chamber in Ox-

ford, found themselves involved, and which issued twenty years afterwards in the famous "Essay on Human Understanding." Starting with a far different topic, they found themselves quickly at a stand, and it came into the thoughts of Locke that before entering "upon inquiries of that nature, it was necessary to examine our own abilities, and see what objects our understandings were or were not fitted to deal with."

FIRST. We obtain knowledge from Sensation, as Locke expresses it; or from Sense-Perception, as I express it. Such is the knowledge we have of body, of body extended and resisting pressure, and of our organism as affecting us, or as being affected, with smells, tastes, sounds, and colors.

SECONDLY. We obtain knowledge from Reflection, as Locke calls it; from Self-Consciousness, as I express it. Such is the knowledge we have of self and of modes, actions, and affections, say as thinking, feeling, resolving.

I am convinced that from these two sources we obtain, not all our knowledge, but all the knowledge we have of separately existing objects. We do not know, and we cannot, as will be shown forthwith, so much as conceive of, a distinctly existing thing, excepting in so far as we have become acquainted with it by means of sensation and reflection, or of materials thus derived. Here Locke held by a great truth, though he did not see how to limit it on the one hand, nor what truths required to be added to it on the other.

THIRDLY. There is the truth involved, and seen intuitively in Body and Mind. This can scarcely be called a third inlet, but it is an expansion of what is contained in the other two, and may be expediently exposed to view under a third head. I am not sure whether all our knowledge may not be traced up to the two sources of

the external and internal sense taken with a full and wide meaning. However, there is more revealed in sense than a mere knowledge of an external thing. There is more in self-consciousness than a bare knowledge of self as existing.

We know bodies as being in space and occupying space, as exercising power over us and over other bodies in particular, as resisting us and resisting each other. We believe in them as extended in three dimensions, and going out towards infinity. This implies a knowledge of and belief in space and the necessary qualities of space as unfolded in mathematics. It involves a knowledge of numbers, and of the relations of numbers as expanded in arithmetic.

In self-consciousness we have also a variety of cognitions. We know self as having personality and personal identity. We know it as having power over its own acts and over things without us. We know it as acquiring knowledge, and as remembering, imagining, judging, reasoning, wishing, willing, discerning between good and evil. As more especially important, we discover certain truths to be also necessary and catholic, that is, believed in by all men. All these exercises go out into infinity.

I have been seeking to unfold these, under the heads of primitive cognitions and beliefs, in Part Second of this work. They are not usually put under the heads of sensation and reflection; they seem to go out and beyond these inlets. Or they may be resolved, as I rather think they may, into intuitions involved in the exercise of sense-perception and self-consciousness, but requiring to be unfolded. In either case they are intuitive truths.

But under whatever head we place them, they are not to be left vague and loose in the enunciation of them. They are to be rigidly tested by the three criteria of self-

evidence, necessity, and catholicity, so that we may be sure that they are fundamental truths.

The question of the origin of our Ideas is substantially the same with that of the sources of our Knowledge; but, in discussing this second question, it is of all things essential to have it fixed what is meant by "idea." Plato, with whom the term originated as a philosophic one, meant those eternal patterns which have been in or before the Divine mind from all eternity, which the works of nature participate in to some extent, and to the contemplation of which the mind of man can rise by abstraction and philosophic meditation. Descartes meant by it whatever is before the mind in every sort of mental apprehension. Locke tells us that he denotes by the phrase "whatever is meant by phantasm, notion, species." Kant applied the phrase to the ideas of substance, totality of phenomena, and God, reached by the reason as a regulative faculty going out beyond the province of experience and objective reality. Hegel is forever dwelling on an absolute idea, which he identifies with God, and represents it as ever unfolding itself out of nothing into being, subjective and objective. Using the phrase in the Platonic sense, it is scarcely relevant to inquire into the origin of our ideas; it is clear, however, that Plato represented our recognition of eternal ideas as a high intellectual exercise, originating in the inborn power of the mind, and awakened by inward cogitation and reminiscence. In the Kantian and Hegelian systems the idea is supposed to be discerned by reason; Kant giving it no existence except in the mind, and Hegel giving it an existence both objective and subjective, but identifying the reason with the idea, and the objective with the subjective. Using the phrase in the Cartesian and Lockian sense, we can inquire into the origin of our ideas.

In accordance with modern usage in the English tongue, it might be as well perhaps to employ the word "idea" to denote the reproduced image or representation in the mind, and the abstract and general notion. Thus explained, it would exclude our original cognitions on the one hand, and also the regulative principles of the mind on the other. An idea, in this sense, would always be a reproduction in an old form, or more commonly in a new form, of what has first been known. We first know objects, external or internal; and then we may have them called up in whole or in part, magnified or diminished, mixed and compounded in an infinite variety of ways; or, by an intellectual process, we may contemplate one of their attributes separately, or group them into classes. Our ideas, in this sense, are ever dependent on our cognitions; we cannot have an idea, either as an image or a notion, of which the materials have not been furnished by the various cognitive powers, primary and secondary. It is always to be remembered that by increase and decrease, by intellectual abstraction and generalization, our ideas may go far beyond our knowledge; still, as our ideas in the last resort depend on our knowledge, they must be drawn from the same quarters. When the question is put as to the origin of our ideas, we are thrown back on the Three Sources from which all our knowledge is derived. So far as our ideas of separately existing objects are concerned, they are all got ultimately from the outward and inward senses; to this extent the doctrine of Locke is unassailable. We cannot imagine or think of any other kind of existence than matter and mind, with space and time, though, for aught we know, there may be other substances and beings in the universe with a far different nature. But then we are led by our cognitive and faith

powers, intellectual and moral, to clothe the objects thus known with qualities and relations which cannot be perceived either by sensation or reflection. It is not by one or other of these, or by both combined, that I come to believe that space and time are infinite, that this effect must proceed from a cause, that this benevolent action is good, and that this falsehood is a sin; nor is it by either or by both that I can rise to the conviction that the effect is forever tied to its cause, and that lying must be a sin in all time and in all eternity.

The principle, *Nihil est in intellectu quod non prius fuerit in sensu*, has been ascribed to Aristotle, but most certainly without foundation, as the great Peripatetic everywhere calls in intuition in the last resort, and is ever coming to truth which he represents as self-evident and necessary. The maxim has been ascribed to the Stoics, who, however, at the same time, placed in the mind a native ruling principle.[1] It is assuredly not the principle adopted by Locke, who is so often represented as favoring it; for the great English philosopher ever traces our ideas, not to one, but to two sources, and delights to derive many of our ideas from reflection. It is, however, the fundamental principle of that school in France and in Britain which has been called Sensational. There are three very flagrant oversights in the theory of those who derive all our ideas from sensation: *First*, there is an omission of all such ideas as we have of spirit and of the qualities of spirit, such as rationality, free-will, personality. *Secondly*, there is a neglect or a wrong account of all the further cognitive exercises of the mind by which it comes to apprehend such objects as infinite time, moral good, merit, and responsibility. *Thirdly*, there is a denial, or at least oversight, of the mind's deep

[1] See *supra*, p. 35, for the view of the Stoics.

convictions as to necessary and universal truth. Sensationalism, followed out logically to its consequences, would represent the mind as incapable of conceiving of a spiritual God, or of being convinced of the indelible distinction between good and evil; and makes it illegitimate to argue from the effects in the world in favor of the existence of a First Cause.

Locke is ever to be distinguished from those who derive all our ideas from the senses. He takes great pains to show that a vast number of the most important ideas which the mind of man can form are got from reflection on the operations of our own minds. His precise doctrine is that the materials of the ideas which man can entertain come in by two inlets, sensation and reflection; that they are at first perceived by the mind, and then retained; and that they are subsequently turned into a great variety of new shapes by the faculties of discernment, comparison, abstraction, composition, and the power of discovering moral relations. The ideas being thus obtained, he supposes that the mind can perceive agreements and disagreements among them. In particular, it is endowed with a power of intuition, by which it at once perceives the agreement and disagreement of certain ideas, discovers these to be in the very nature of ideas, and necessary. Such being the views of Locke, they are as different from those of the Sensationalists, on the one hand, as they are from those of Descartes, Leibnitz, and Kant on the other. Indeed, the most careless reader cannot go through the *Essay on Human Understanding* without discovering that, if Locke has a strong sensational, he has also a rational side. He will allow no ideas to be in the mind except those which can be shown to spring from one or other of the inlets, and yet he resolutely maintains that, with these ideas before it, the mind may perceive truth at once; he thinks that morality is capable of demonstration, and in religion he is decidedly rationalistic. So far, it appears to me, we can easily ascertain the views of Locke. It is more difficult to determine how far he supposed the mind to be capable of modifying or adding to the materials derived from the outward and inward senses. It is quite clear that he represents the mind as having the power to perceive and compound and divide these ideas, and discover resemblances and other relations; but there are passages in which, consistently or inconsistently, he speaks of the mind having something

more suggested to it, or superinducing something higher. Locke speaks of certain ideas being "suggested" to the mind by the senses, — a phraseology adopted by Reid and Stewart (*Essay*, II. vii. 9); and of "relation" as "not contained in the real existence of things, but extraneous and superinduced" (II. xxv. 8).

Confining our attention to the points which are clear, I think we may discover, not certainly such grave errors as in the doctrines of the sensationalists, but still several oversights. *First*, he overlooks the cognitions and beliefs involved in the exercises with which the mind starts. This has arisen, to a great extent, from his attaching himself to the theory that the mind begins, not with knowledge, but with ideas, which are at first perceived by the mind, and then compared, upon which comparison it is that the mind reaches knowledge. He has never set himself to inquire what is involved in the sensation and reflection which give us our ideas. He takes no notice of intuition enabling us to look directly at the very thing, or of our intuition of extension, or of the cognitive self-consciousness, or of the beliefs gathering round space and time and the infinite. *Secondly*, he has not given a distinct place and a sufficient prominence to the ideas got from the mind observing certain qualities and relations in objects made known by sensation and reflection. The defects of his system, in not giving an adequate account of our idea of moral good, which he gets from our sensations of pleasure and pain, with a law of God superinduced — without so much as his trying to prove how we are bound, on his system, to obey that law — was perceived at an early date by British writers, who adhered to him as closely as possible; and Shaftesbury and Hutcheson called in a Moral *Sense* (as an addition to Locke's outward and inward sense); while Bishop Butler called in conscience, which he characterized as a "principle of reflection." *Thirdly*, he has not inquired what are the laws involved in the Intuition to which he appeals in the fourth book of his Essay as giving us the most certain of all our knowledge. Had he developed the nature of intuition, and the principles involved, with the same care as he has expounded the experiential element, his system would have been at once and effectually saved from the fearful results in which it issued in France, where his name was used to support doctrines which he would have repudiated with deep indignation. He is right in saying that the mind has not consciously before it in spontaneous action such speculative principles as that "Whatever is is," or moral maxims in a formalized shape; but he has failed to perceive that such principles as these are the rules of

our intuitions, and that they can be discovered by a reflex process of generalization. It is but justice to Locke to say that he acknowledges necessary truth, but it does not form a part of his general theory. His professed followers have abandoned it; and sceptics have shown that he cannot reach it in consistency with his system.

CHAPTER II.

LIMITS TO OUR KNOWLEDGE, IDEAS, AND BELIEFS.

It is instructive to find that not a few of the most profound philosophers with which our world has been honored have been prone to dwell on the limits to man's capacity. The truth is, it is always the smallest minds which are most apt to be swollen with the wind engendered by their own vanity. The intellects which have gone out with greatest energy to the furthest limits are those which feel most keenly when they strike against the barriers by which human thought is bounded. The minds which have set out on the widest excursions, and which have taken the boldest flights, are those that know best that there is a wider region lying beyond, which is altogether inaccessible to man. It was the peculiarly wise man of the Hebrews who said, "No man can find out the work that God maketh from the beginning to the end." The Greek sage by emphasis declared that, if he excelled others, it was only in this, that he knew nothing. It was the avowed object of the sagacious Locke to teach man the length of his tether, which, we may remark, those feel most who attempt to get away from it. Reid labored to restrain the pride of philosophy, and to bring men back to a common sense, in respect of which the peasant and philosopher are alike. It was the design of Kant's great work to show how little speculative reason can accomplish. In our own day we have had Sir W. Hamilton showing, with unsurpassed logical power, within what narrow bounds the thought of man is restrained.

We have already in our survey gathered the materials for enabling us to settle the general question, in which, however, are several special questions which should be carefully separated : —

1. What are the limits to man's power of acquiring knowledge? The answer is, that he cannot know, at least in this world, any substance or separate existence other than those revealed by sense and consciousness. There may be, very probably there are, in the universe, other substances besides matter and spirit, other existences which are not substances, as well as space and time, but these must ever remain unknown to us in this world. Again, he can never know any qualities or relations among the objects thus revealed to the outward and inward sense, except in so far as we have special faculties of knowledge ; and the number and the nature of these are to be ascertained by a process of induction, and by no other process either easier or more difficult. This is what has been attempted in this treatise, it may be supposed with only partial success in the execution, but, it is confidently believed, in the right method. A more difficult process need not be resorted to, and would conduct us only into ever-thickening intricacies ; and an easier method is not available in the investigation of the facts of nature in this, nor indeed in any other department. After unfolding what seems to be in our primitive cognitions, I gave some account of the primitive faiths which gather round them, and classified the relations which the mind can discover, and unfolded the moral convictions which we are led to form. Such are the limits to man's original capacity, of which there are decisive tests in self-evidence, necessity, and catholicity.

Within these limits man has a wide field in which to expatiate ; a field, indeed, which he can never thor-

oughly explore, but in which he may discover more and more. What he may discover, and what he may never be able to discover, are to be determined by the separate sciences, each in its own department. Thus, what he can find out of mind, of its various powers and original convictions, is to be determined by the various branches of mental science. What he can ascertain by the senses, aided by instruments, must be settled by the physical sciences.

2. The limits to man's capacity of knowledge being ascertained, it is easy to determine the limits to his power of forming ideas. The materials must all be got from the three sources of knowledge which have been pointed out. There are two classes of powers employed in enlarging and modifying these. The one is the imagination, which can decrease, as when on seeing a man it can form the idea of a dwarf; and increase, as when it can form the idea of a giant; or separate, as when it sees a man it can form an image of his head; or compound, as when it puts a hundred hands on man, and forms the idea of a Briareus. It should be observed that the imagination can never go beyond the rearrangement of the materials supplied by the original sources of knowledge. The mind can further discover a number of relations among the objects primitively known. These I have endeavored to classify. In particular, out of the concrete it can form innumerable abstracts, and from the singulars construct an indefinite number of universals. It should be observed that man's power of imagination and correlation extends over his moral convictions as well as his intellectual cognitions. Thus, he can clothe the hero of a romance in various kinds of moral excellence of which he has discovered the rudiments in himself or others, and perceive relations among the moral properties which

have fallen under his notice. These are the limits to man's capacity of forming ideas, determined, first, by his original powers of cognition, and, secondly, by his powers of imagination and correlation.

3. Our beliefs, it is evident, may go beyond our cognitions. Still there are stringent limits set to them in our very nature and constitution. Thus, we can never believe anything in opposition to self-evident and necessary truths. There are beliefs which are in our very mental make and frame, and which are altogether beyond our voluntary power. If we except these, however, our power of possible belief is as wide as our capacity of forming ideas. If it is asked what we should believe within these limits, the answer is, Only what has evidence to plead in its behalf, what has self-evidence or mediate evidence. Metaphysics, with their tests, can determine what truths are to be received on their own authority; as to the kind and amount of evidence required in derivative truth, this can be settled only by the canons of the special departments of investigation, historical or physical.

But do our beliefs ever go beyond our ideas? This is a very curious question, and different persons will be disposed to give different answers to it. It seems clear to me that every belief must be a belief in something of which we have some sort of conception. A belief in nothing would not deserve to be called a belief, and a belief in something of which we have no apprehension would be equivalent to a belief in nothing. But it will be urged that every man must believe in certain great truths regarding eternity of which he has no conception, and that the Christian in particular has such a truth, in which he firmly believes, in the doctrine of the Trinity. Still, I maintain that even in such a case there is an ap-

prehension or conception. Thus, in regard to infinity, we apprehend space or time, or God, who inhabits all space and time, stretching away further and further; but far as we go, we apprehend and believe that there is and must be a space, a time, a living Being, beyond. Or we apprehend a spiritual God, with attributes, say of power and love; and we strive to conceive of him, and of these perfections; and we believe of him and his power and goodness that they transcend all our feeble attempts at comprehension. In every supposable case of belief we have an apprehension of some kind. A traveller tells us that he saw in Africa a monstrous animal, which he cannot describe so as to enable us to comprehend it; we understand the man's language, and if we have reason to look upon him as trustworthy we believe his statement; but in doing so our belief goes upon the apprehension of an animal different from all other animals. An inspired writer tells us about there being three persons in one Godhead; and, having evidence of his inspiration, we believe him: but even here there is an apprehension; there is a conception of the God of truth as revealing the truth. There is more: this revelation is contained in words of which we form some sort of apprehension: thus, we are told that Jesus Christ is God; that he became man; and yet we discover that he is somehow or other different from God the Father. Thus in all our beliefs there seems to be a conception of something, and of something real and existing; but still it may be of something conceived by us as having qualities which pass beyond our comprehension, or qualities of which we have no comprehension.

Some of these conceptions, with their attached beliefs, are those which raise up within us the feeling of the sublime, and are, of all others, the most fitted to elevate the

soul of man. Need I add that it is possible for us to believe in truths which we cannot reconcile with other truths of sense or understanding? It is wrong in us, indeed, to believe in a proposition unsupported by evidence; but when it is properly sustained, and when especially it is seen to have the sanction of God, then the mind asserts its prerogative of belief, even when the truth transcends all sense, all personal, all human experience, nay, even when it is encompassed with darkness and difficulties on every side. Faith feels that it is in one of its highest exercises when founding on the authority of God it believes, not indeed in contradictions (which it can never do), but in truths which it cannot reconcile with the appearance of things, or with other truths which the reason sanctions.

CHAPTER III.

RELATION OF INTUITION AND EXPERIENCE.

We must now dive into the subject whose depths the great Teutonic metaphysician sought to sound; not that Kant spoke much of it in the intercourse with his friends, but he was forever pondering it as he sat in his bachelor domicile, as he paced forward and backward in his favorite walk in the suburbs of Königsberg, as he lectured to his class, or elaborated his published writings. The general question embraces several special ones, which must be carefully distinguished. In seeking to settle these, we must always have it fixed in our minds in what sense we employ the word "experience;" for the phrase may be understood in narrower or in wider significations. It may be confined to the outward fact known or apprehended, or it may also embrace the inward consciousness.

It is the aim of this whole work to explain the nature of intuition. In this chapter it is of all things necessary to explain the nature of experience.

First, there is Personal Experience, which consists of what each one has passed through. There is no opposition, even in appearance, between intuition and such an experience. Every exercise of intuition is an experience.

Second, there is a Gathered Experience, or an Induction. This consists of the experience of mankind generally; in fact, of the aggregate of what man can observe. It is the relation of this human experience to intuition that I am to discuss in this chapter. The gathered experi-

ence depends on the personal experience, but it is the aggregate of experience that we compare or contrast with fundamental truth.

No experience of man can reach a law that is necessary and must therefore be universal, that is, have no exceptions. All human experience testifies that day has always been followed by night, and night by day; but it is conceivable, and believable if evidence be produced, that there might be day not followed by night, or night not followed by day. Gravitation within our experience is a universal law, but the discoverer did not believe it to be ultimate, and it is quite possible that in other parts of the universe bodies may be connected by quite a different law.

But there are laws which are necessary and universal. By intuition we discover this to be so in individual cases, but we perceive that it would be the same in every other like case, and we make the law universal. There is a necessity attached to the individual case, and this attaches itself to the general law, so far as the generalization is properly made. In many cases we are sure that we have properly generalized the exercises of the individual intuitions, — for example, in the law of contradiction, in the axioms of Euclid, and in certain moral maxims, as that we ought to pay our debts. Now it is of great importance to draw the distinction very definitely between these two kinds of laws, and thereby be enabled to determine as to every law to which class it belongs.

Let us view Experience in its relation to each of the Threefold Aspects of Intuition.

II.

1. There is the relation of Experience to Intuition considered as a body of Regulative Principles. Under this

Aspect intuition lies in the mind, as gravitation lies in matter, ready to act, in fact ever acting. J. S. Mill has shown that all the laws of nature, say gravity or chemical affinity, are of the nature of *tendencies*, and they tend to act according to their nature. Under this view intuition, being native, though possibly to some extent hereditary, is prior to experience of every kind, but it tends to act as every law of nature does. There is no exercise of will, but it prompts and instigates to action. All the intuitions seek for objects, and are gratified when the objects are presented. Just as the function of the eye is to see, and light being seen is pleasant to the eyes, so all our cognitive, believing, and judging powers are gratified when the objects to which they look are presented. Intuition, as a regulating principle, is ever inclining us to gather experience, — is, indeed, the most powerful incitement to this. In people of strong intellectual power, there is a feeling of restraint, almost of disappointment, when they are not able to gratify these impulses. A feeling of melancholy is apt to come over men of genius when they find that their high ideas are not realized.

Our belief as to the boundlessness of space is ever alluring us to explore it in earth and sea, and in the deep expanse of heaven ; and our belief in time without beginning and without end is ever tempting us to go back through all the years which human history opens to us, and beyond these, through all the ages which geology discloses, and to look forward, as far as human foresight and Bible prophecy may enable us, into the dim events of the future. Thus, too, our minds delight to discover substances acting according to their properties, and plants and animals developing according to the life that is in them, to find species and genera in the whole or-

ganic kingdoms, to trace mathematical relations corresponding to our higher intellectual cravings among all the objects presenting themselves on the earth and in the starry heavens, and to rise from near effects to remote causes in space and time. Nor is it to be omitted that our moral convictions prompt us to look for, and when we have found Him, to look up to, a Moral Governor of the universe, and to anticipate of Him that He will be ready to support the innocent sufferer, and to punish the wicked. It should be added, that in experience we are ever finding a gratifying exemplification of our native tendencies, and a satisfying corroboration of our intuitive expectations. We expect a cause to turn up for this mysterious occurrence; we may be disappointed at first, but in due time it appears. We anticipate that this secret deed of villany will be detected and exposed; and so we are amazed for a season when we hear of the perpetrator flattered by the world, and seemingly favored in the providence of God; but our moral convictions are vindicated when the wicked man is at last caught in the net which had all along been weaving for him, and all his ill-gotten spoils are made to add to the weight of his ignominy, and to embitter his disgrace.

2. There is the Relation of Experience to our Intuitive Perceptions. Here the Regulative Principle comes forth in active exercise. It is called out by an object which, however, is always apprehended. In many cases it is an external object; it is thus that our intuition as to matter is stimulated by a body presented to the senses. Our intuition as to personal identity is called forth by the consciousness of a present state with the remembrance of a past. Our conviction of moral good comes forth on the contemplation of an act as good or evil.

This object is commonly called the "Occasion," and the general law is laid down, that the perception is called up only when there is an object as the occasion. The two together, the inner power and the object or occasion, constitute the cause or concause which by their mutual action produces the effect which is the Intuitive Perception.

It should be observed that every intuition looks to its own, its corresponding, and appropriate object; it is a cognition of the object or a belief in it, or a judgment in regard to it. The sense-intuition is called out by a sensible object to which it looks and which it knows: the idea of space by an object extended; the idea of time by an event in time; our convictions as to causation by an object acting, or an effect produced; our moral perceptions, faiths, and decisions by good or evil acts. Thus closely are intuition and experience connected. Our intuitive convictions are evoked by personal experiences, and as they know and believe and judge in regard to objects they become experiences. We thus avoid one of the fatal errors of Kant, that our intuitions are à priori forms imposed on objects by the mind out of its own stores, whereas they all look to things and become cognitions, faiths, and judgments. We thus establish a realism in every part of our nature.

3. There is the Relation of Experience to Generalized Intuitions. We have called attention to the circumstance that our intuitions as Regulating Principles are not under the eye of consciousness. They are underground roots, which come forth as visible plants in the Perceptions and are put in scientific form by the defined Maxim.

We must be careful to distinguish between two kinds of laws. One kind is obtained from the observation of

scattered facts external or internal which may have fallen under our notice, no matter how, through our own experience or that of others also. The other is formed from our primitive perceptions. For laws so different in their nature and in the manner of their being reached, it is desirable to have a difference of appellation or nomenclature. The one class may be called INTUITIVE, the other INDUCTIVE. The one is À PRIORI, the other À POSTERIORI. The one is EXPERIENTIAL, the other RATIONAL, founded on the perceived nature of things. The one is NECESSARY, the other CONTINGENT. The one claims to be AXIOMS or MAXIMS, the other the LAWS of OBSERVATION.

The latter kinds of law may or may not hold good beyond the limits of experience. We may be able to say of some of them, as of the law of universal gravitation, that they are wide as the cosmos open to human observation; but we are not entitled to affirm dogmatically that they do, or that they must, pervade all space. It is a general rule that the leaves of monocotyledons have parallel veins; but the arum and some other plants proceeding from one seed-lobe have netted venation. As a rule mammals are viviparous, but mammals have been discovered which bring forth their young by eggs. There may be worlds in which substances obey very different magnetic laws from those to which they are subject in our earth. It is quite possible that, in other parts of the universe, there may be intelligent creatures whose ideas follow an order of succession very different from those of human beings. But it is true over all our earth, and must be true in all other worlds as well as in this, that cruelty is a sin. Present to the mind a phenomenon, that is, a new object or occurrence, and it insists that it must have had a cause, and this whether it be within or beyond the range of our experience.

Considered under this aspect, the contrast is not between intuition and experience, but between GENERALIZED INTUITIONS and a GATHERED EXPERIENCE. The former are at once the deeper and the higher. They proceed on the nature of things and are immutable as long as the things exist. They are the truths which constitute the foundation of our knowledge and on which our minds fall back in the last resort. From the very earliest date men have been seeking to rear some central and abiding truths which may combine all other truths and act as a defence. But this cannot be done by mere empirical facts in which they have only "brick for stone" and "slime for mortar," and the end is a scattering as at Babel. However, by these eternal truths which we have been considering men may realize the idea of their youth, and build a city and a tower whose top may reach to heaven.

CHAPTER IV.

ON THE NECESSITY ATTACHED TO OUR PRIMARY CONVICTIONS.

I.

We have seen throughout the whole of this treatise that a conviction of necessity attaches to all our original cognitions, beliefs, and judgments, both intellectual and moral. But we may find ourselves in hopeless perplexities, or even in a network of contradictions, unless we determine precisely to what it is that the necessity adheres. The proper account is, that the necessity covers the ground which the conviction occupies, — neither less nor more. We may err, either by contracting it within a narrower or stretching it over a wider surface. It follows that if we would determine how far the necessity extends, we must carefully and exactly ascertain what is the nature of the native conviction, and what are the objects at which it looks.

And this requires us to specify with precision what we cannot do in regard to necessary truth. A common account is that we cannot "conceive" the contradictory of such truth. But the word "conceive" is ambiguous, and in itself means nothing more than "image" or "apprehend," that is, have a notion; and certainly we are not entitled to appeal to a mere phantasm or concept as a test of ultimate truth. The exact account is that we cannot be convinced of the opposite of the intuitive conviction. But our intuitive convictions may take the

form of cognitions, or beliefs, or judgments; and, according to the nature of the intuition, that is, according as it is knowledge, or faith, or comparison, is the nature of the necessity attached. Whatever we *know* intuitively as existing, we cannot be made to know as not existing. Whatever we intuitively *believe*, we cannot be made not to believe. When we intuitively discover a relation in objects, we cannot be made to *judge* that there is not a relation. From neglecting these distinctions, which are very obvious when stated, manifold errors have arisen, not only in the application of the test of necessity, but in the general account given of primary truths. When we take them along with us, the test of necessity admits of an application at once easy and certain.

II.

1. Beginning with our Cognitions, the conviction is that the object exists at the time we perceive it, and has the qualities we discover in it. This implies, according to the law of identity (in the form of *non-contradiction*), that it is not possible that it should not be existing, and that it should not be in possession of these qualities at the time it falls under our notice. But it does not imply that the object has a necessary or an eternal existence. It does not imply that the object must have existed in all other or in any other circumstances. For aught our conviction says, the object in other positions, or with a different set of preëxisting causes, might not have existed at all, or might have had a different set of qualities. But while the necessity does not reach further, it always extends as far as the perception; thus it demands that body be regarded by us as extended and as resisting pressure, that self be looked on as capable of such qualities as thought and feeling, and that the properties of

body and mind should not be regarded as produced by our contemplation of them.

2. Coming now to our original Beliefs, it has been shown in regard to them, that while they proceed on our cognitions, they go beyond them, go beyond the *now* and the *present*, — declaring, for instance, of time and space, that they must transcend our widest phantasms or conceptions of them, and that they are such that no space or time could be added to them. And as far as the conviction goes, so far does the necessity extend.

3. The necessity attached to our Judgments is in like manner exactly coincident with them. These imply objects on which they are pronounced. At the same time, the judgment, with its adhering necessity, has a regard not to the objects directly, but to the relation of the objects. These objects may be real, or they may be imaginary. I may pronounce Chimborazo to be higher than Mont Blanc, but I may also affirm of a mountain 100,000 feet high that it is higher than one 50,000 feet high. As to whether the objects are or are not real, this is a question to be settled by our cognitions and beliefs, original and acquired, and by inferences from them. But it is to be carefully observed, that even when the object is imaginary, the judgment proceeds on a cognition of the elements of the objects. Thus, having known what is the size of a man, we affirm of a giant, who is greater than a common man, that he is greater than a dwarf, who is smaller than ordinary humanity. Still, the necessity in the judgment does not of itself imply the existence of the objects, still less any necessary existence; all that it proclaims is, that the objects might exist out of materials which have fallen under our notice, and that the objects, being so and so, must have such a relation.

In a sense, then, our primitive judgments are hypo-

thetical; the objects being so must have a particular connection. There may be, or there may never have been, two exactly parallel lines; what our intuitive judgment declares is, that if there be such, they can never meet. A similar remark may be made of every other class of intuitive comparisons. There may or there may not be a sea in the moon; but if there be, its waters must be extended, and can resist pressure. There may or there may not be inhabitants in the planet Jupiter; but if there be, they must have been created by a power competent to the operation. But it is to be borne in mind, that when the objects exist, the judgments, with their accompanying necessity, apply to them.

And here I am tempted to say a word on a question of nomenclature. Throughout this treatise the phrase "intuition" has been applied to our primitive cognitions and primitive beliefs, as well as our primitive judgments. But as there is a difference between intuition as directed to individual objects and as directed to the comparison of objects, I have sometimes thought, when it is necessary to distinguish them, "Intuitive Perceptions" might be the more appropriate phrase for the one, and "Intuitive Reason" for the other.

4. It holds good also of our Moral Perceptions, that the necessity is as wide as our conviction, but no wider. It implies that the good or evil is a real quality of certain voluntary acts of ours, and this whether we view it or not, and independent of the view we take of it. It involves that certain actions are good or evil, whenever or wherever they are performed, in this land or other lands, in this world or other worlds. Rising beyond cognitions and beliefs, the mind can pronounce moral judgments on certain acts apprehended by it. These judgments do not imply the existence of the objects; but the decision

will apply to the realities, if there be such. Thus, there may or may not be ungodliness or ingratitude in the planet Saturn; but if there be such a thing, we declare that it must be evil and condemnable. It is to be noted that our moral convictions do not imply that we shall certainly practise the good, or that all must be morally good which men declare to be so.

III.

As soon as our original cognition or belief assures us of the existence of an object with certain qualities, or as a judgment affirms a necessary relation, the law of identity comes into operation, and insists on our keeping truth consistent with itself; and in particular, the law of non-contradiction restricts us from thinking or believing the opposite of the truth apprehended. When we know that self exists, we cannot be made to think that self does not exist. Constrained to look on time as without limits, we at once deny that it can have limits. Deciding that every effect has a cause, we cannot be made to believe that it has not had a cause. We have a conviction that murder is a crime, and cannot be made to decide that it is not. We have thus necessity in two forms as a test of fundamental truth; in its original or positive, and also in a negative form, founded on the law of non-contradiction. In no case can the conviction be wrought in us that what we intuitively know or believe to exist does not exist, or that the contradictory of a primitive judgment can possibly be true.

It has been remarked by metaphysicians that in some cases we can conceive the opposite of a necessary truth, while in others we cannot. The account given above enables us to see how this should be, and determines whence the differences, and how far they extend. In

the case of our primitive cognitions and beliefs, we can imagine or apprehend the opposite of what we know or believe. We can imagine ourselves not existing at any given time, and that an event remembered by us did not occur. We can conceive, too, though often with some difficulty, the contradictory of synthetic judgments à priori; thus we can apprehend (though we can never decide or believe) that there should be a change without a cause. But, in the case of analytic judgments (see *supra*, pp. 193, 194), we cannot so much as conceive them contradictory. The reason is obvious. The judgment pronounced is implied in the subject in regard to which the predication is made; and the denial of the proposition would be destructive of the notion with which we start. We cannot conceive of an island that it should not be surrounded by water, for were it not so enclosed it would not be an island.

It should be noticed that the conviction of necessity follows primitive conviction wherever it is found. In what is technically called demonstrative or apodictic reasoning, all the new steps are seen to be true intuitively, and the necessity goes through the whole process step by step. Thus the necessity adheres not only to the axioms of Euclid, but goes on to the last proposition of the last book. It is the same in all other sciences which are demonstrative, as Ethics and Logic are to a limited extent; the necessity adheres to whatever is drawn from first truths by intuitive principles. It is needful to add, that in mixed processes, in which there is both intuition and experience in the results reached, the necessity sticks merely to the intuitive part, and does not guarantee the whole. I suppose there is no doubt of the accuracy of the mathematical demonstrations employed by Fourier in his disquisitions about heat, but there are disputes as

to some of the assumptions on which his calculations proceed. We have here a source of error. In processes into which intuition enters, but is only one of the elements, persons may allot to the whole a certainty which can be claimed only in behalf of one of the parts.

One other distinction requires to be drawn under this head. There are cases in which primitive judgments are founded on primitive cognitions and beliefs, and are thus necessary throughout. It is thus that, proceeding on our primitive knowledge and faith as to time, we declare there can be no break in its flowing stream. But in other cases our judgment may proceed on a proposition reached by a gathered experience. Thus, having found that laurel-water is poisonous, intuition insists that he who has drunk laurel-water has drunk poison. The necessity here simply is, that the conclusion follows from the premises; and the conclusion itself is as certain as the observational premiss, neither less nor more.

CHAPTER V.

CRITICISM OF DISTINCTIONS

DRAWN BY METAPHYSICIANS IN REGARD TO THE RELATION OF INTUITIVE REASON AND EXPERIENCE.

These distinctions fail to express the exact truth because they do not proceed on the reality of things.

I.

The Distinction between the Understanding and the Reason. — Milton draws the distinction between reason "intuitive" and "discursive." Reid and Beattie represent Reason as having two degrees: in the former, reason sees the truth at once; in the other, it reaches it by a process. There is evidently ground for these distinctions. But the distinction I am now to examine was first drawn in a formal manner by Kant, and has since assumed divers shapes in Germany and in this country. According to Kant, the mind has three general intellectual powers, the Sense, the Understanding (Verstand), and the Reason (Vernunft); the Sense giving us presentations or phenomena; the Understanding binding these by categories; and the Reason bringing the judgments of the Understanding to unity by three Ideas — of Substance, Totality of Phenomena, and Deity — which are especially the Ideas of Reason. The distinction was introduced among the English-speaking nations by Coleridge, who however modified it. "Reason," says he, "is the power of universal and necessary convictions, the source and substance of truths above sense, and having their evidence in themselves. Its presence is always marked by the necessity of the positions affirmed" (*Aids to Reflection*, I. 168). It has become an accepted distinction among a certain class of metaphysicians and divines all over Europe and the English-speaking people of the great American continent. These parties commonly illustrate their views in some such way as the following: The mind, they say, must have some power by which it gazes immediately on the true and the good. But sense, which looks only to the phenomenal and fluctuating, can-

not enable us to do so. As little can the logical understanding, whose province it is to generalize the phenomena of sense, mount into so high a sphere. We must therefore bring in a transcendental power — call it Reason, or Intellectual Intuition, or Faith, or Feeling — to account for the mind's capacity of discovering the universal and the necessary, and of gazing at once on eternal Truth and Goodness, on the Infinite and the Absolute.

Now there is great and important truth aimed at and meant to be set forth in this language. The speculators of France, who derive all our notions from sense, and those of Britain, who draw all our maxims from experience, are overlooking the most wondrous properties of the soul, which has principles at once deeper and higher than sense, and the faculty which compounds and compares the material supplied by sense. And if by Reason is meant the aggregate of Regulative Principles, I have no objections to the phrase, and to certain important applications of it, but then we must keep carefully in view the mode in which these principles operate.

We may mark the following errors or oversights in the school referred to: (1.) Intuitive Reason is not, properly speaking, opposed to Sense, but is involved in certain exercises of sense. There is knowledge, and this intuitive, in all sense-perception. It may be proper indeed to draw the distinction between the two elements which are indissolubly wrapt up in the one concrete act. Kant endeavored to do so, but gave a perversely erroneous account when he represented intuition as giving to objects the form of space and time; whereas intuition simply enables us to discover that bodies are in space, and events in time. There is certainly a high intuitional capacity involved in every exercise of mind which takes in extension, or regards objects as exercising property. And then it is altogether wrong to represent sense as the one original source of experiential knowledge, which is derived from consciousness as well as from perception through the senses. (2.) It is wrong to represent Intuitive Reason as opposed to the Understanding. There is intuitive reason involved in certain exercises of the understanding, as when we infer that what is true of a given class must be true of each of the members of the class. Nor is it to be forgotten that the understanding can abstract and generalize upon a great deal more than the objects of sense; it can do so upon the materials supplied by consciousness, and by all the further convictions of the mind, such as the conscience. (3.) It is wrong to represent the mind as gazing immediately and intuitively on the true or the good, upon the necessary or

the universal. It can indeed rise to the conception of these, but, in order to its doing so, it has to engage in abstraction and generalization, which makes the truth gained no longer a truth of pure reason, but of reason and understanding combined. It is not consistent with the natural history of the mind to represent it as at once rising to the contemplation of some ideal of the fair and good, which it is able to look at when the spirit is not agitated by passion or bedimmed by earthliness. We are undoubtedly led by native taste to admire the beautiful, but it is when embodied in a lovely object. We are constrained, in spite of a rebellious will, to approve of the good, but it is when a good action, or rather a good being performing a good action, is presented to the mind. The general ideas of the true, the fair, and the good, do not spring up intuitively in the mind, but are fashioned out of intuitive elements by those addicted to reflection. (4.) It is preposterously wrong to suppose that the mind can employ intuitive convictions in philosophic or religious speculations without any associated exercise of the logical understanding. Not being immediately conscious of the Regulative Principles of the mind, we cannot employ them in discussion till we have first inquired into their nature by induction, and embodied their rule in a clear definition or a precise axiom.

II.

Distinction between "À Priori" and "À Posteriori" Principles. — Prior to the time of David Hume, the phrase "à priori" was applied to the procedure from principle to consequent, and from cause to effect, using the word *cause* in a wider and looser sense than in these times; while the phrase "à posteriori" was employed to characterize the procedure from consequent to antecedent, or from effect to cause. Cudworth's language is, "The abstract universal rationes, 'reasons,' are that higher station of the mind, from whence, looking down upon individual things, it hath a commanding view of them, and, as it were, 'à priori' comprehends or knows them" (*Immut. Mor.* III. iii. 2). Since the publication of Hume's philosophic works, and more especially since the *Kritik of Pure Reason* came to have such an extensive influence, "à priori" denotes whatever is supposed to be in the mind prior to experience; and "à posteriori" whatever has been acquired by experience. The distinction thus indicated and designated may be admitted without allowing that it probes the subject to its depths, and certainly without admitting all the views usually associated with it. Even in regard to knowledge acquired by experience, I maintain that, prior to

its acquisition, the mind has the power of acquiring it. The bodily frame has certainly the organs of sense prior to seeing, hearing, tasting, touching, or smelling. The mind has certainly the capacity of perception before it actually observes any external object, and the power of comparison before it can notice relations. And, in acknowledging the distinction, we must ever protest against the idea that any universal or necessary truth can be discerned by the mind without a process of à posteriori induction and arrangement. So far as the phrase is applied to general maxims, it should be on the understanding that they have been drawn by a logical process out of the individual à priori convictions.

Closely allied to the question of à priori truth is the question, Can there be an à priori science? This is a topic which will come more fully before us in some of the chapters of the next book. There is a sense in which certain sciences are à priori, that is, the principles of them are in the constitution of the mind, and are ready to manifest themselves in individual acts. In another sense there can be no à priori science, for science employs general principles, and there are no such principles known à priori. But there are sciences the ground principles of which are not the generalizations of a gathered experience, but of the necessary decisions of the mind, and these sciences may be called à priori with perfect propriety, provided always that it be understood that, while the general law is in the mind prior to its manifestation, it is discovered by us only through the generalization of the individual exercises.

III.

Distinction between Form and Matter. — This phraseology was introduced by Aristotle, who represented everything as having in itself both matter (ὕλη) and form (εἶδος). It had a new signification given to it by Kant, who supposes that the mind supplies from its own furniture a form to impose on the matter presented from without. The form thus corresponds to the à priori element, and the matter to the à posteriori. But the view thus given of the relation in which the knowing mind stands to the known object is altogether a mistaken one. It supposes that the mind in cognition adds an element from its own resources, whereas it is simply so constituted as to know what is in the object. This doctrine needs only to be carried out consequentially to sap the foundations of all knowledge, — for if the mind may contribute from its own stores one element, why not another? why not all the elements? In fact, Kant

did, by this distinction, open the way to all those later speculations which represent the whole universe of being as an ideal construction. There can, I think, be no impropriety in speaking of the original principles of the mind as forms or rules, but they are forms merely, as are the rules of grammar, which do not add anything to correct speaking and writing, but are merely the expression of the laws which they follow. As to the word "matter," it has either no meaning in such an application, or a meaning of a misleading character.

IV.

Distinction between Subjective and Objective. — The word "subject" has a diversity of meaning in the English language. In logic, it denotes the term of which predication is made; in common discourse, it means the topic about which affirmations are made; and in metaphysics, the mind contemplating an object. The term "object," too, is not without its ambiguity. Sometimes it stands for a thing contemplated by the mind, and sometimes for a thing considered in itself, and often it denotes the aim or end which the mind has in any of its pursuits. I am afraid it will be impossible, in common discourse, to deprive the phrases of any one of these various significations. The adjectives "subjective" and "objective" have not had such a variety of meaning, and the nouns "subject" and "object," when used together, in philosophic discussion, should be limited so as to be exactly coincident with them. They should, in my opinion, never be used except as correlative phrases, the terms "subject" and "subjective" being employed to designate, not the mind in itself, but the mind as contemplating a thing; and the terms "object" and "objective" to denote, not a thing in itself, but a thing as contemplated by the mind. It is clear that if the phrases were employed in this sense when used at the same time, we should be saved an immense amount of word-warfare, in which subject and object, subjective and objective, act so prominent a part. We should be prevented from speaking, as is so often done, of the mind as subject or subjective, except when it is looking at something; or of the thing as an object or objective, except when it is contemplated by a thinking mind. We would also know at once what is meant when it is said that the subject implies the object, and the object the subject. It does not mean that the existence of mind implies an external thing to be contemplated, or that a thing, as such, implies a mind to consider it: it signifies simply that the one implies the other, as the hus-

band implies the wife, and the wife a husband, from which we cannot argue that every man must have a wife and every woman a husband, but merely that when the man is a husband he must have a wife, and when the woman is a wife she must have a husband. The subject implies the objective merely in the sense that when the mind is contemplating a thing, it must be contemplating it; and that when a thing is contemplated, it must be contemplated by a contemplative mind.

With a large school of metaphysicians and divines, the words "subjective" and "objective" are used in a Kantian sense, and are made, without the persons employing them being aware of it, to bring in the whole peculiarities of the critical philosophy. In the philosophy which has germinated from Kant, the *subject mind* is supposed to have a formative power, and the *object thing* is supposed to be a thing, or phenomenon, *plus* a shape or a color given it by the mind. Proceeding on this view, the phrase "subjective" comes to express that which is contributed by the mind in cognition. Thus, by a juggling use of these phrases, persons are being involved, without their having the least suspicion of it, in a philosophy which makes it impossible for us ever to know things except under aspects twisted and distorted no man can tell how far from the reality. We can be saved from this only by using them as correlatives, and insisting, when we do so, that the subjective mind is so constituted as to know the object as it is, under the aspects presented.

v.

Logical and Chronological Order of Ideas. — Sir W. Hamilton quotes a saying of Patricius, "Cognitio omnis a mente primam originem, a sensibus exordium habet primum." The distinction is deep in Kant, and has been fully and skilfully elaborated by M. Cousin. It is said that there are ever two factors in the formation of our à priori ideas, reason and experience; and that logically reason is first, whereas chronologically experience comes first. The distinction is not clearly nor happily drawn by such phraseology. For it is difficult to understand what is meant by "origin" as distinguished from "beginning;" and what is meant by "logical" in such an application: it cannot mean, according to the rules of formal logic it must mean, according to reason; and then comes in the important fact that reason and experience are not, properly speaking, opposed. The distinction, however, points to a truth, inasmuch as our intuitions, as mental faculties, laws, or tendencies, are in the mind prior

to the exercise of them. There is a difficulty, however, in apprehending what is meant by the logical or reason element being first, but not chronologically. The intuition as a law is in the mind prior, chronologically, to the experience of it. The individual exhibition of the conviction and the experience of it come chronologically together. It is true, however, in the fullest sense, that an experience is necessary in order to our being able to present the necessary conviction in the form of an abstract definition or general maxim. This distinction connects itself with another, which I am now to examine.

VI.

Distinction between Reason as the Cause, and Sense and Experience as the Occasion. — Cudworth refers to ideas of a high kind, which he admits are "most commonly excited and awakened occasionally from the appulse of outward objects knocking at the door of the senses," and complains of men not distinguishing "betwixt the outward occasion, or invitation, of these cogitations, and the immediate active or productive cause of them" (*Immut. Mor.* iv. ii. 2). It is allowed that, apart from sense and experience, the mind cannot have any ideas: still, it is not experience which produces our necessary ideas; it is merely the occasion of them, the true cause being the reason. Thus, without an exercise of sense, there could be no idea of space in the mind; but then the operation is merely the occasion on which the idea of space is produced by an inherent mental energy. Aloof from a special event, there could be no idea of time; but then it is affirmed that upon an event becoming apprehended, the idea of time, already potentially in the mind, is ready to spring up. Without the observation of contiguous concurrences, there could be no idea of cause; but on such being presented, the mind is found to be already in possession of an idea of cause by which to bind them in a necessary connection. Till some human action is presented, there could be no idea of moral good; but on a benevolent action being apprehended, the idea of moral good is ready to spring up.

There is important truth which this account is intended to express, but it does not bring it out accurately. It is not so easy to settle precisely the difference between cause and occasion: the occasion is, in fact, one of the elements of the unconditional cause, or rather, concause, which produces the effect. In regard to the original faculty or law of the mind, it is undoubtedly the main element of the complex cause which issues in a spontaneous intuitive conviction.

But there is need of a concurrence of circumstances in order to this faculty operating. But instead of confusedly binding all these up in the one expression "occasion," it is better to spread them out individually, when it will be found that each acts in its own way. Thus we should show that an action of the organism is needful to call our intuition of sense-perception into exercise. We should show, too, that an apprehension of an object or objects is needed, in order to call into action our intuitions as to the infinity of time, and eternal relations, and moral good; and then it may be seen that this apprehension may not have been got from sense, and that in our primary cognition of the object there may have been intuition ; thus, it is because we intuitively know every object as having being, that we declare its identity of being at different times. Again, in respect to the generalized maxim, or notion, the account is fitted to leave a very erroneous impression, for it makes it appear as if it were upon the occasion of the presentation of a material object that there springs up the abstract idea of space; and of an event becoming known, that there arises the idea of time ; or of a succession of events being apprehended, that the mind forms an idea of cause. It is all true that there must be experience in order to the construction of the abstract or general notion, but the notion is formed, after all, by the ordinary process of abstraction and generalization.

BOOK III.

ONTOLOGY.

CHAPTER I.

KNOWING AND BEING.

THESE are topics which the subtle Greek mind delighted to discuss from the time that reflective thought was first awakened within it; that is, from at least five hundred years before the Christian era. I confess I should like to have been present when they were handled on that morning when Socrates, as yet little more than a boy, met the aged Parmenides, so venerable with his noble aspect and hoary locks, and Zeno, tall and graceful, and in the vigor of his manhood, in the house of Pythodorus, in the Ceramicus, beyond the walls of Athens.[1] At the same time, I fear that, after all, I could have got little more than a glimpse of the meaning of the interlocutors. It is clear that even Socrates himself is not sure whether he is listening to solid argument, or losing himself among verbal disquisitions and dialectic sophistries. And who will venture to make intelligible to a modern mind — even to a Teutonic mind — the arguments by which Parmenides and Zeno prove that Being is One, and the impossibility of Non-Being; or translate with a meaning, into any other tongue, the subtleties of those Dialogues, such as Parmenides and the Sophist, in which Plato makes his speakers discourse of

[1] See the opening of the *Parmenides* of Plato.

the One and of the Existing? The grand error of all these disputations arises from those who conduct them imagining that pure truth lies at the bottom of the well, whereas it is at the surface; and in going past the pure waters at the top, they have only gone down into mud and stirred up mire. We are *knowing*, and knowing *being*, at every waking hour of our existence, and all that the philosopher can do is to observe them, to separate each from the other, and from all with which it is associated, and to give it a right expression. But the ancient Greeks, followed by modern metaphysicians, imagined that they could do more, and so have done infinitely less. They have tried to get a more solid foundation for what rests on itself, and so have made that insecure which is felt to be stable. They have labored to make that clearer which is already clear, and have thus darkened the subject by assertions which have no meaning. They have explained what might be used to explain other truths, but which itself neither requires nor admits of explanation, and so have only landed and lost themselves in distinctions which proceed on no differences in the nature of things, and in mysteries of their own creation.

Knowing, in the concrete, is a perpetual mental exercise, ever under the eye of consciousness; and we can by an intellectual act separate it from its object, and contemplate it in the abstract. In all acts of knowledge we know Being in the concrete; that is, we know things as existing, and we can separate in thought the thing from our knowledge of it, and the thing as existing from all else which we may know about the thing. The science which treats of Being, or Existence, is Ontology. If we define Ontology as the science of what we know of things intuitively, we are giving it a precise field which

can be taken in from the waste and cultivated. Gnosiology and Ontology may be treated to a great extent together in Metaphysics. Still they can be distinguished, and the distinction between them should be steadily kept in view. The one seeks to find what are our original powers, the other to determine what we know of things by these powers.

In order to reach this second end, we must go over, one by one, the various classes of objects known by our intuitive powers; but this not, as in Gnosiology, to determine what the power is, but what is the object which it looks at. I have been seeking to accomplish the one as well as the other of these all throughout this treatise. By simple cognitive or presentative powers (as Hamilton calls them), we know objects in the singular and in the concrete; by consciousness we know self as having being, and capable of thought and feeling; by perception we know body as extended and resisting pressure; and by both we know self and not-self as having an existence independent of the mind contemplating them. By the reproductive powers we are led to believe in the past event recalled by memory as real, that is, as having occurred in time past; and round space, known in the concrete in perception, and time, known with the event in reminiscence, there gather a number of beliefs which can be ascertained and expressed. Among the objects thus known or believed in, — and, it should be added, imagined out of the materials supplied by the cognitive and reproductive powers, — the mind can discern necessary relations, that is, arising from the very nature of the objects. The mind, too, is led to know and believe in a moral excellence in the voluntary acts of intelligent beings, and to discover the bearings and relations of moral good and evil.

Such a survey as this enables us to determine what are the kinds of reality which the mind is able to discover. In sense-perception and consciousness it is a real thing, known as having certain qualities. In our beliefs, too, we look to a real thing having attributes. We believe, we must believe, space and time to have an existence, not as mere forms of thought, but altogether independent of the contemplative mind. Our judgments may or may not look to a reality, for we may discover relations among imaginary as well as among actual objects. But when the objects are real the relations discovered are also real. The reality discovered by the moral power lies in a quality of certain voluntary acts performed by persons possessed of conscience and freewill. We thus see how such an inspection settles for us not only that there is a reality, but what is the sort of reality; whether a present or an absent reality, whether an independent reality or a reality in objects. Thus we maintain that abstract and general notions have a reality when the objects from which they are drawn are real; but we are not to understand, as Plato's language would lead us to believe, that they have a reality independent in some intelligible world. The relations of quantity treated of in mathematics have a reality, but it is only in space and time, and in bodies as occupying space and existing in time. Cause and effect have a reality independent of the mind which observes them; but this is, after all, in the substances which act and are acted on. Moral good and sin are certainly both real, but their actuality is in the dispositions of responsible beings.

I flatter myself that by the account given in this treatise, I have avoided the error of those who would dissociate the native laws of the mind from things. Some give à priori principles a formative power in the

mind, and make them add to the objects, or even create the objects. Now, they are no doubt in the mind, but they are there as powers to enable us to apprehend objects. They are in our very constitution as laws, but they are laws in relation to things. They exist as tendencies prior to operation, but when they come into action it is as cognitions, beliefs, and judgments in regard to objects.

But what can metaphysical science do in the way of establishing the reality of objects? Truly it can do very little; and by going beyond its own narrow territory, by trying, for instance, to prove first truths, or get a ground for original principles, it has often exposed itself to most damaging assaults. Still it can do something if it keep within its own impregnable fortress. It can show what our original principles are, how they work, and what they say; and all this surely is matter of great speculative importance, independent of the question as to whether we can confide in their depositions. In particular, it can unfold the process by which the mind attains its convictions, and show how they stand related to things. Thus — in consciousness we have the object — that is, self immediately under inspection, so that we might as well deny the existence of the cognitive conviction as of the thing apprehended. Again, in sense-perception we have an immediate knowledge of an extended object, and this ever coexisting with the immediate knowledge of self, so that we may as well deny self as the external object perceived by the conscious self. Then our intuitive beliefs are not independent of our knowledge of objects; they all proceed on a cognition, or, as derived from it, an apprehension of objects. It is in contemplating the objects known or conceived that we believe them to have qualities which do not fall

under our immediate inspection; and, if we deny our intuitive beliefs, it must be on principles which would undermine our intuitive knowledge. Again: our intuitive judgments all proceed on our cognitions and beliefs; on comparing objects known or believed in, we perceive them to have certain necessary relations involved in their very nature. Our original convictions thus constitute an organic whole, springing from immediate knowledge as the root, and rising into comparisons and faiths, as the branches and leaves.

As we thus go round about the tower of human knowledge, we find it a compact structure, consolidated from base to summit. He who would attack any part must attack the whole, and he who would attack the whole will find every part strengthening it. The foundation is sure, being well laid; the building is also sure, as being firmly built upon it; and he who would assail the superstructure will find the basis bearing it up throughout.

The objections which may be advanced against the reality of things will be answered in the chapters which follow.

CHAPTER II.

IDEALISM.

I.

THERE are associations in the mind joined with our primitive intellectual and moral exercises. The mirth is not in the merry peal, nor the melancholy in the funereal toll of the bell; nor is the music in the flute or organ, but in the soul which breathes and beats and rings in harmony with the external movements. The view differs according to the point from which men take it, according to men's natural or acquired temperaments, tastes, and characters, and according to the circumstances in which they are placed. How different the estimate which is formed of a neighbor's character, according as he who judges is swayed by kindness or malignity, by charity or suspicion! The scene varies according to the humor in which we happen to be, quite as much as it changes according to the light or atmosphere in which we survey it. Hope gladdens everything as if it were seen under an Italian sky, whereas disappointment wraps it in mist and cloud. Joy steeps the whole landscape in its own gay colors, whereas sorrow wraps it as in the sable dress of mourning. Do not such facts, known to all observers of human nature, and dwelt on by poets as being largely their stock-in-trade, prove that in all our ideas, views, notions, opinions, there is a subjective element no less prominent and potent than the objective? And if there be, what limits are we to set to it? Is our metaphysical philosophy agreed with itself on this subject?

Or, with all its refinements, can it draw a decided line which will forever separate the one from the other?

1. All knowledge through the senses is accompanied with an organic feeling, that is, a sensation. Our immediate acquaintance with the external world is always through the organism, and is therefore associated and combined with organic affections pleasing or displeasing. Certain sounds are felt to be harsh or grating; others are relished as being sweet or melodious or harmonious. Some colors, in themselves or in their associations, are felt to be glaring or discordant, while others are enjoyed as being agreeable or exciting. In short, every sense-perception is accompanied with a sensation, the perception being the knowledge, and the sensation the bodily affection felt by the conscious mind as present in the organism. He who is no philosopher finds little difficulty in distinguishing the two in practice; and it ought not to be difficult for the man who is a philosopher to distinguish the two in theory. Every man can distinguish the sugar in itself from the sweet flavor which we have in our mouth when we taste it, or the tooth and gum from the toothache which is wrenching them; and the metaphysician is only giving a philosophic expression to a natural difference when he distinguishes between sensation and perception.

2. Certain mental representations are accompanied with emotion. Thus the apprehension of evil as about to come on us, or those whom we love, raises up fear; the contemplation of good, on the other hand, as likely to accrue to us, or those in whom we feel an interest, excites hope. This is only one example of the kind of emotions which attach themselves to all mental pictures of objects, as having brought, or as now bringing, or as likely to bring, pleasure or pain, or any other sort of good or evil,

and which steep the objects in their own fluid, and impart to them their peculiar hue. Hence the gloom cast over scenes fair enough in themselves, as by a dark shadow the effect of the interposition of a gloomy self obstructing the light; hence the splendor poured over perhaps the very same scenes at other times, as by light streaming through our feelings, as through stained glass or irradiated clouds. Hence the pleasure we feel in certain contemplations, and the pain called forth by others. Hence the fear that depresses, that arrests all energy, and at last sinks its victim; hence the hope which buoys up, which cheers and leads to deeds of daring and of heroism. But while the two are blended in one mental affection in the mind, it is not difficult, after all, to distinguish between the object known and the accompanying emotion; between the trumpet sounding and the martial spirit excited by it; between the canvas and oil of Titian and the feeling which his ascending Mary raises within us, glowing and attractive as the splendors of the dying day; between our friend as he is in himself and the deep and tender regard which we must entertain towards him.

3. Certain ideas are associated with other ideas which raise emotions. It does not concern us at present to explain the nature of the laws which govern the succession of our ideas. It is certain that ideas which have at any time been together in our mind, either simultaneously or successively, in a concrete or complex state, will tend to call forth each other; and an idea which has no emotion attached may come notwithstanding to raise up feeling through the idea with which it is associated, and which never can come without sentiment. Thermopylæ, Bannockburn, and Waterloo look uninteresting enough places to the eye, and to those who may be ignorant of

the scenes transacted there; but the spots and the very names stir up feeling like a war-trumpet in the breasts of all who know that freedom was there delivered from menacing tyranny. Thus it is that the buds and blossoms of spring, and the prattle of boys and girls, call forth a hope as fresh and lively as they themselves are. Thus it is that the leaves of autumn, gorgeous though they be in coloring, and the graveyard where our forefathers sleep, clothed though it be all over with green grass, incline to musing and to sadness. But neither is it very difficult to distinguish between an apprehension or representation and its associated feeling, to separate between the primrose and the spring emotion which bursts forth on the contemplation of it, between the grave of a sister and the sorrowful tenderness which it evokes.

4. The mind of the mature man cannot look on any one object without viewing it in a number of relations. A house presented to an infant may be nothing but a colored surface with a certain outline; to the mature man it is known as a house, possibly with a loved dweller within. An apple falling to the ground is known intuitively simply as an object in motion; but by the educated man it is known as a vegetable fruit falling to the ground in obedience to what seems a universal law of matter. Does not the mind, in such cases, add to the object relations imposed by itself? To this I answer, that all that the mind does is, to add to its original a further knowledge, a knowledge of relations discovered in the objects themselves. The object before us is not merely a colored shape; it is a house, and as a house we are entitled to regard it. The apple falling to the ground is in fact a fruit obeying a power of gravitation. The letters of a book are to the infant mere black strokes; to

the child learning to read they are figures, signs of sound; to the grown man or woman they are signs of thoughts or feelings, addressed by a writer to a reader: but the truth is, the letters are real things under all these aspects; real strokes, real signs of sounds and sense. So far as we proceed accurately, according to the laws of thought using experience, and are employed in discovering the actual relations of things, the conceptions reached imply a reality quite as much as the intuitions with which the mind starts.

I am not prepared to say that these are all, but they are the more important, of the natural influences which operate to color or enlarge our knowledge. The Author of our nature certainly means us to add to our knowledge by continual observation, and to graft the acquired on the original stock; and he has superinduced attached sensations, and made the very laws of our nature to call in associated thoughts and feelings in order to intensify and elevate our enjoyment, or in some cases to be a prognostic of evil which should ever be associated with offence and disgust. So far as music gives us more pleasure than wire vibrations, so far as a Swiss valley, guarded by Mont Blanc, or the Matterhorn, or the Jungfrau, is finer than an accumulation of grass, trees, stones, and snow; so far as the spot where a great and good man was born is more stimulating than the uninteresting hut, which is all the bodily sense perceives, — we owe it to the beneficence of God, who has made us sensitive as well as cognitive beings. So far as we are led to shrink from baser scenes, it is by a provision which is intended to keep us back from what might issue in pain or in sin. It should be added that, while this is no doubt the original intent of these peculiarities of our constitution, they may, in the voluntary and sinful abuse of them, become

a seduction to evil and a scourge to inflict the keenest misery. They may lead man, through a misgoverned imagination, to paint in glowing colors a fictitious object, and then pursue it, when he

> "Sees full before him, gliding without tread,
> An image with a glory round its head;
> This shade he worships for its golden hues,
> And makes (not knowing) that which he pursues."

Thus it is that the mind irradiates with a romantic tinge objects unworthy in themselves, and then goes on to love them and delight in them. Man may thus come, too, to be haunted by spectres of his own creation, to be mocked by his own shadow seen across some of the deeper gorges of the earth, and striding opposite as he himself moves. Thus it is that there are to us, for our gratification, glowing colors, burnishing what are in themselves only mists and damps, and spanning the heavens above us with a bow of hope, assuring us that these waters which threaten will not overwhelm us; thus it is, too, that there are hideous mock suns personating the very brightest light which God has planted in these heavens. Still the man of good sense and of simple honesty will find no difficulty in distinguishing practically between things which I have been seeking in this chapter to separate theoretically.

II.

Our imaginations in their wide excursions and our fancies in their cameo forms have a large field allotted to them in our nature, and this is to be carefully cultivated. They have a territory rich and fertile in poetry, in romance, in art, and in these they have the privilege of expatiating at pleasure. The ideal spirit is an elevated and an elevating one. There are elements in human

nature fitted — I believe intended — to produce and foster it. It is meant that sensations should warm our knowledge into a glow, that feelings should buoy up our intellectual notions into a higher region than they themselves can reach, and that our colder apprehensions should be linked to others which are more fervent. The glory thus cast around objects, commonplace enough it may be in themselves, renders them more lovable and beloved. The melody which the ear gives to the sound increases our interest in the thought or sentiment uttered, and turns, if I may so speak, prose into poetry. The ideal spirit may be an incentive to glorious enterprise; it steeps the country before us — mountain, vale, sea, and island — in sunlight, and thus allures us to explore it. It is especially elevating when it takes a moral direction, when it places before us a high model to which we ever look, and to which we would become assimilated, and sets us forth amidst sacrifices made, to accomplish some high end, reaching forth far in time or into eternity. Still, it is of the utmost moment that the person steadily draw the distinction between our knowledge of the object and the light in which we view it.

Still idealism is to be confined within very rigid limits. It has no place allowed it in science. Newton did not seek to construct the law of gravitation out of his own brain, nor to impart additions to it on the pretence of improving and beautifying it. What he did was to discover it and detect its exact nature. I am aiming throughout this whole treatise to show that idealism is not entitled to have a place in metaphysics any more than in science.

I cannot but admire some of the grand cosmogonies which have been drawn out in Eastern theosophies, and by the genius of such men as Plato and Leibnitz, but all

the while I feel that they have nothing solid to rest on, and I find that the actual world is more wondrous far than the ideal ones. So I am sure that the realistic method, if carefully prosecuted, will exhibit to us a far grander philosophy than human speculation has ever done.

III.

While much may be said in praise of the ideal spirit, I can bestow no commendation on idealism as a philosophic system, that is, the system which would raise our associated sentiments to the rank of cognitions. I allow that it is vastly superior to sensationalism, which acknowledges only the visible and the tangible; but, in making this allowance, it is proper to add that, on the principle that extremes meet, it sometimes happens that there are persons at one and the same time sensationalists and idealists, believing only in the physical, and yet not believing the physical to be real. But, speaking of idealism in itself, it is an unphilosophic system, and, in the end, has a dangerous tendency. Its radical vice lies in maintaining that certain things, which we intuitively know or believe to be real, are not real. I say, certain things; for were it to deny that all things are real, it would be scepticism. Idealism draws back from such an issue with shuddering. But, affirming the reality of certain objects, with palpable inconsistency it will not admit the existence of other objects equally guaranteed by our constitution. This inconsistency will pursue the system remorselessly as an avenger. Idealism commonly begins by declaring that external objects have no such reality as we suppose them to have, and then it is driven or led in the next age, or in the pages of the next speculator, to avow that they have no reality at all. At this stage it will still make lofty pretensions to a real-

ism founded, not on the external phenomenon, but on the internal idea. But the logical necessity speedily chases the system from this refuge, and constrains the succeeding speculator to admit that self is not as it seems, or that it exists only as it is felt or when it is felt; and the terrible consequence cannot be avoided, that we cannot know whether there be objects before us or no, or whether there be an eye or a mind to perceive them. There is no way of avoiding this black and blank scepticism but by standing up for the trustworthiness of all our original intuitions, and formally maintaining that there is a reality wherever our intuitions declare that there is.

The idealist has indeed a truth, which he weaves into the body of his system, but that truth is misapprehended and perverted. There are impressions and inferences ever mingling, naturally or inadvertently, lawfully or unlawfully, with our knowledge; and he confounds these, when it is his business, as a professed philosopher, to distinguish them in theory — as men of common sense ever distinguish them in practice. His system is not clearness, but confusion. He has dived below the surface, but has not, after all, gone down to the bottom so as to see all, and his view of the deep is more obscure than if he had remained above. Amazed or enraptured with the discovery of certain facts immediately below that which is patent to the vulgar eye, he looks on them as the main or sole facts, and henceforth overlooks all the superficial ones, forgetting that it is true in philosophy, as in geology, that the rock strata which jut out into the most prominent peaks are those which, if we follow them, dive down into the deepest interior. He has sought to attain a higher position, but has stopped half-way, and his views, after all, are not so clear as

those obtained further down, and they are certainly much more confusing than those which he might have had, had he reached the clear height above all dimming influence; they are at best like those which the traveller gets on cloudy days when he has climbed a certain elevation up the Alps, and, in the midway mists, catches occasional glimpses of the green valleys below him, and of the imposing mountain-tops and sky yet far above him.

CHAPTER III.

SCEPTICISM AND AGNOSTICISM.

I.

In what I have to say on this subject I do not refer to the forms which scepticism takes in the common affairs of life, where it is often not only legitimate, but a very high duty to discharge in exposing lying and deceit, and generally, in clearing the moral atmosphere. I treat it only as setting itself against deeper and fundamental truth.

Scepticism may take a variety of forms which, however, differ in some being more thorough-going than others, some denying the veracity of certain of our cognitions, others denying the trustworthiness of all. The most common form which it takes in the present day is what is called Agnosticism. The difference between this and absolute scepticism is, that while the one denies all truth the other tells us that truth cannot be found, especially in philosophy and religion. Agnosticism is Nescience in that it declares that we cannot find truth; Nihilism in that it asserts that there is nothing to be known. All these forms agree in this, that they set aside theoretically fundamental truths and practically deprive us of the benefit which we might derive from the lofty ideas and faiths which we ought to cherish. Like most kinds of folly, scepticism commonly does not reach its last stage at once, but advances step by step. Some philosopher of eminence sets aside one of our intuitions, and then an advancing thinker, impelled by logical con-

sistency, or by the sharpness of his mind, or by levity or wantonness, or by the love of paradox or of notoriety, shows how, on the same ground, we may deny them all. It was thus that Berkeley, in denying the substantial existence of body, prepared the way for Hume, who denied the substantial existence of spirit; and thus that Kant, in affirming that space and time had no existence out of the mind, opened a path for Fichte, when he declared that the external object in space might also be the creation of the mind; and for Schelling and Hegel when they made mind and matter, Creator and creature, all and alike ideal. I have already discussed scepticism disguised as idealism; I am now to offer a few remarks on an avowed scepticism.

II.

Let us understand precisely how far a sceptic may go. In doing so it is essential to remember the distinction between the spontaneous and reflex use of our intuitions. Under the first of these aspects they not only claim authority, they secure practical concurrence and obedience. Every man knows that he has a bodily frame, and believes that it exists in space, and that if he would go in the nearest way to a given point, he must walk in a straight line. Doubt and denial are possible only in regard to the reflex statement of intuitive principles. Every man is in fact convinced that he has a solid bodily frame, and that the nearest way to a particular place is a straight line; but it is possible for him, if he chooses, to deny the propositions in which these truths are conveyed; it is quite competent for him speculatively to assert that he has not a body, and that the shortest road to a given point is a crooked line.

And this leads me to point out in what respect scep-

ticism may be allowable, and wherein it may even be beneficial. The dogmatist often lays down and employs, for purposes lawful and unlawful, principles represented as indisputable, which have not the sanction of our constitution, or which may be expressed in a form only partially or approximately correct. Great interests may often be involved in having these principles doubted or disputed. Without this we may find, before we are aware of it, great moral or religious truths assaulted or undermined; or we may set up for defence of the citadel of truth a crazy and insecure turret, which is a positive weakness, and which, as it falls, may give an easier inlet to the enemy. This, then, is the special mission of the sceptic: it is to lay a restraint on the dogmatist; at times, if need be, to assail or to lash him. It would be wrong to deny that the scepticism of Hume has cleared the philosophic atmosphere of many weakening and deleterious influences which had been gathering for centuries. The great sin of scepticism lies in this, that it attacks indiscriminately the good and the evil, and would destroy both as by a consuming fire. But surely there may be a means of securing all the good ends which scepticism has produced, without the accompanying destruction of the good. Socrates seems to me to have succeeded in this, when he attacked the pretentious systems of his age, at the same time that he held resolutely by every great moral and spiritual truth. Let it be admitted that our spontaneous convictions guarantee a truth, but let it be avowed at the same time that any given philosophic expression of them is fallible, and may be doubted, disputed, and denied. Let it be understood, as to every philosophic principle proffered, that we are entitled, nay, in duty bound, to examine it before we assent to it, and that the burden of establishing that it is a

thorough transcript of the law in the mind lies on him who employs it. By this simple rule, rigidly enforced and scrupulously followed, we might have all the benefits which have arisen from the siftings of scepticism, without its fearful throes, and its slaughters — terrible as those of a battle-field — of noble credences and inspiring hopes.

III.

But what are we to do with the sceptic, that is, with one who speculatively denies intuitive truth?

1. There are some things which we *ought not* to do with him. We should not waste our precious feeling in professing to sympathize with him, as if he were practically troubled with doubts as to the existence of himself, or his friends, or his enemies, or his food, or his money, or his earthly interests; for in respect of all these he is quite as firm a believer as the man who comes to convince him with an apparatus of argument. Nor need we be at the trouble of appointing a guard to watch him lest he run against a carriage, or step into a river, or fall over a precipice. For whatever he may profess to us or to himself, he believes in the existence of the carriage, the river, and the precipice, and has a salutary awe of their perilous power. Nor would there be any propriety in declaring him mad, and sending him to Bedlam, for he only pretends to have lost his senses, or rather, never to have had them, and in his simulation has over-acted his part, and gone beyond the madman, who never sets himself against intuitive truth. (*a*)

2. There are some things which we *cannot* do with the sceptic, and therefore should not attempt to do. We cannot answer him by argument, that is, mediate proof; for this, if followed sufficiently far back, will conduct us

to a principle which cannot be proven, and which therefore the sceptic will deny. It can scarcely be regarded as a complete refutation to demonstrate that his sceptical denials are inconsistent with certain affirmations made by him; for he may admit the inconsistencies, and then found his argument against the possibility of discovering truth, on the circumstance that he and every other must inevitably fall into contradictions. It is not even a confutation when it is shown that this scepticism is suicidal, or violates the law of contradiction, for he may find no position so suited to him as that which maintains that all knowledge is contradictory.

IV.

Still there are some things which we can do for or with the sceptic.

1. We may make use of any admissions avowed by him or incidentally made, in order to shut him up into truths which he denies. Sometimes we may be able to show that the truth which he allows implies the truth which he disallows. In other cases we can ask him on what principle or ground he assents to certain truths; and when we have his answer, we may be able to show how, on the same grounds, he must admit other propositions. Thus we ask the Berkeleyan on what ground he admits the existence of the subject mind; and, whatever it be, we may show that the same ground supports the doctrine of the existence of the object matter. Thus, too, we may ask how it is that Kant admits the existence of a thing behind the phenomenon, and by help of this process proves that the phenomenon is the thing. If Fichte admit an Ego, or a self, or a belief, it is competent to proceed thereon to show that we are

thereby constrained to believe in the existence of objects out of self and independent of our belief. This *argumentum ad hominem* is perfectly allowable. We can say to him, If you admit *this*, you must also admit *that*. If he is so guarded and stinted in his admissions as to say that he allows *this* merely practically, and not theoretically or absolutely, we are entitled to demand of him that he likewise believe *that* practically. Thus, if he admit practically that he has at any time had (what Hume allows at the outset) an impression, or idea, we may show him that he should also admit practically that he has an abiding and an identical self, and that he contemplates objects out of him, and independent of him, and, as more important, that he should admit practically that he is a responsible being, and must give account of himself. Should he try to save himself by declaring that he believes the first, or second, or third of those truths, only because obliged to do so, we may show that there is a similar necessity requiring him to believe the rest. This is a telling argument, which has been used with great skill and power by many of the opponents of scepticism in all ages. It is emphatically an *argumentum ad hominem*, for it is one which may be used not merely against a particular individual, but with men as men, with every man. No man but admits something, and that something may be employed to make him admit something else. It can be shown that he who doubts believes, that he who denies affirms, and that he who doubts or denies that he doubts or denies, is in the very act of making an affirmation. Such a process goes at least to shut the mouth of the sceptic, for if he open his mouth, it is to let out language which you can turn against him. His only refuge is in a thoroughgoing scepticism, which affirms that man's supposed knowledge

is contradictory, and that all argument is delusive. You can at least insist on this scepticism that it remain silent, and not advance arguments which are inconsistent with that judgment or belief to which it would appeal. (*b*)

V.

We can carefully explain the nature of a primitive conviction. The method named under the last head is one which we may quite legitimately employ in dealing with the sophist or the caviller; we may always kill him with his own weapons. But we have a more satisfactory mode of dealing with the truth-seeking and the truth-loving. We can ask them to examine the nature of the convictions to which we invite them to yield.

1. It can be shown that the mind declares of itself that its primitive perceptions contain knowledge. I do not urge this as a mediate proof, or a new and independent proof; it is simply the statement of a fact, that the mind, in contemplating its original convictions, affirms that there is knowledge in them. As to some of its states, it finds that they contain sensations, sentiments, imaginations, but in every one of them, at the same time, a cognition of self, and in certain of them a cognition of an object or truth external to self and independent of it. It is to these that we ask consent without the aid of further evidence.

2. It may be shown that the intuitive principles of the mind are native, catholic, necessary. It is not truth merely to the individual man, but to all men; not merely to all men, but to all intelligent beings. It is certain, not only to me but to all beings throughout the universe who have capacity to understand it, that if two straight lines proceed an inch without coming nearer, they will proceed a million of miles without coming nearer; and

not only is the wilful infliction of pain a sin on earth, it is a sin in every other part of the universe.

3. The mind declares of certain truths that they need no other truth to support them. There are cases in which it feels that it needs evidence in order to gain its assent. It does not allow that there was such a man as David, king of Israel, or Philip, king of Macedon, till proof is brought forward. It may remain in doubt as to what truth there is in the poetical accounts of the siege of Troy, because no valid evidence is produced. But it draws a distinction between these cases and others in which it needs no probation. When it is asserted that the moon is inhabited, the mind asks proof, but it asks none when it is affirmed that I am the same person to-day as I was yesterday. It is conceivable that the first of these assertions might be substantiated by evidence which would command our assent, but it would not, after all, be a more rational assent than that which we give at once to the other.

4. The mind knows self-evident truth to be the most certain of all truths. What is it that the sceptic demands? It is all-important to put this question, and to fix him down to a specific answer. Does he demand proof or argument? Then it implies that he would be satisfied with argument. But it can be shown him that in argument there is a first principle involved, the dependence of conclusion on premises, and in the last resort we come to a premiss not admitting of probation. But surely he who admits argument must admit all that is in argument; but as to the premiss with which we set out, it is not less evident, it is more evident, than the conclusion. It is so far a weakness in a proposition, or rather of our mind in reference to it, that we do not see it to be true or false immediately. The mind declares

that the most certain of all truths are those which are seen to be true at once and in themselves.

VI.

It can be shown that there is a congruity and consistency among the original and derivative convictions of the mind. This is not urged as if it were an independent and unassailable demonstration. It is conceivable that the power from which human power derives its power might have made all men liable to deception, incapable of being ever detected, in consequence of its being carefully provided that no inconsistencies should creep in. This is certainly possible, though it is by no means probable, according, at least, to our laws of judgment. For, if this power be a Being possessed of goodness and truth, it is not conceivable that he should form any creature liable to be deceived; and, if it be a capricious or malignant power, it is by no means probable that all the deceptions would turn out to be congruous: here or there would come out an original conviction in manifest contradiction to another original conviction, or a derivative principle openly inconsistent with both. The consistency of the parts is thus a sort of corroboration of the truth of each part and of the whole. To give only two examples: It is by intuition, I have endeavored to show, that the intellect, on discovering an effect, looks for a cause, and it always finds, in fact, that for every effect there is a cause; and as it finds this again and again, in an extended and invariable experience, it has in this, not a primary proof, but a secondary confirmation of its intuition. Again, we expect that sin will not go unpunished; from time to time we find it punished in this life, and are thus strengthened in our convictions that it will all be punished at last. All the intuitions

have such corroborations in the daily experience of every man, and these are felt to give a satisfaction to the mind (*c*).

VII.

When we reach the great truth that there is a righteous God, we can plead the Divine veracity in favor of the trustworthiness of the intuitive convictions planted by him in our constitution. Not that even this consideration can be adduced as a primary or an absolute proof; for it is only on the supposition that a God exists that it can be legitimately employed, and our conviction of the Divine existence presupposes a confidence in the veracity of our intuitions and arguments founded on them. But this truth, being once admitted, becomes henceforth the keystone which keeps all the separate and independent parts of our constitution in one compact and stable whole, which can never be broken down, but will be felt to be the stronger the greater the weight that is laid upon it.

VIII.

No truths, recognized by the mind as such, can be shown to be contradictory. In this line of thought a sound metaphysics may accomplish some good ends. Sceptics have labored — and others not sceptics have done their best to aid them — to prove that certain propositions approved of by the mind are contradictory. But the attempt has failed, as can be shown, I believe, as to every case in which it has been tried. It can be proved, in regard to the opposed propositions, that, in some cases, they have no meaning; that, in other cases, the mind pronounces in favor of neither the one nor the other; that, in several cases, the propositions seem to be con-

tradictory only because improperly stated, and when they are properly enunciated the difficulty altogether disappears; and that, in the remaining cases, there is merely a difficulty in proposing a positive reconciliation, and no actual inconsistency.

There is little risk of scepticism producing any injurious influence in the common business of life. The reason is, that circumstances ever pressing on the attention constrain men to proceed on their spontaneous principles, which are sound, even when the speculative principles are altogether infidel. He who is hungry will partake of food, he who sees an offensive weapon about to strike him will avoid it, even though they be not prepared to avow, as philosophers, that there are any such gross things as bread or iron in the universe, or though they may doubt, as metaphysicians, whether food be fitted to nourish, or a sword to kill. It is not in such urgent matters of animal comfort and temporal interest that scepticism is wont to manifest itself, but in far different subjects, and especially in leading persons to doubt of the great truths of morality and religion, the practical action in which is more under the control of the will. Even here there will be times when the spontaneous belief or impulse will overmaster the speculative unbelief; as when moral indignation, implying a belief in the reality of sin, is excited by a mean or dishonest action, or when disease has seized us, and death seems in hard pursuit, and threatens to hurry us to the judgment-seat. Such occasions will call forth the action of conscience, in spite of all efforts to repress it. But when there is nothing of this description to arouse the native feeling, unbelief may succeed in keeping us very much out of the way of all that would call the internal sentiment into activity, and for days, or weeks, or months together it

may seldom arise to utter a protest or create a disturbance of any description; and, even when the deeper moral or religious powers come forth to assert their authority, there may be a vigorous, and so far a successful, warfare waged with them; that is, they may be so far repressed as not to command the will, or lead to any practical operation. Hence the evil of scepticism in chilling the ardor of youth, and confirming the hardness of age, in repressing every noble aspiration and every high effort, while it leaves the soul the servant or slave of the lower, the sensual, the ambitious, the proud, or the selfish impulses of the heart.

(*a*) M. Morel was asked to examine a prisoner who pretended to be deranged, and asked him how old he was; to which the prisoner replied, "245 francs, 35 centimes, 124 carriages," etc. To the same question, more distinctly asked, he replied, "5 mètres, 75 centimetres." When asked how long he had been deranged, he answered, "Cats, always cats." M. Morel at once proclaimed his madness to be simulated, and states: "In their extreme aberrations, in their most furious delirium, madmen do not confound what it is impossible for the most extravagant logic to confound." (See *Psychological Journal*, October, 1857.)

(*b*) It is thus that when Professor Ferrier declares that we know the object *mecum*, we can show that on the same ground, whatever it be, he should admit an object independent of the *me*. He says (*Scottish Philosophy*, pp. 19, 20), that "no man in his senses could require a proof that it [that is, real existence] is." I am glad of this appeal. A man's senses tell him that the stone before us has an existence independent of the contemplative mind.

(*c*) Speaking of primary convictions of the mind, Hamilton says: "They are many, they are in authority coördinate, and their testimony is clear and precise. It is therefore competent for us to view them in correlation; to compare their declarations; and to consider whether they contradict, and, by contradicting, invalidate each other. This mutual contradiction is possible in two ways: 1*st*, it may be that the *primary data themselves* are directly or immediately contradictory of each other; 2*d*, it may be that they are mediately or

indirectly contradictory, inasmuch as the *consequences* to which they *necessarily* lead, and for the truth and falsehood of which they are therefore responsible, are mutually repugnant. By evincing either of these, the veracity of consciousness will be disproved; for, in either case, consciousness is shown to be inconsistent with itself, and consequently inconsistent with the unity of truth. But by no other process of demonstration is this possible." He adds: "No attempt to show that the data of consciousness are (either in themselves or in their necessary consequences) mutually contradictory has yet succeeded."

CHAPTER IV.

(SUPPLEMENTARY.)

ON THE CONDITIONED AND THE UNCONDITIONED.

LEIBNITZ complained of Sophie Charlotte of Prussia that she asked the *why* of the *why*. There are some truths in regard to which we are not warranted to ask the why. They shine in their own light; and we feel that we need no light, and we ask no light, wherewith to see them, and any light which might be brought to aid would only perplex us. In all such cases the mind asks no why, and is amazed when the why is asked; and feels that it can give no answer, and ought not to attempt an answer. Other truths may be known only mediately, or by means of some other truth coming between as evidence. I need no mediate proof to convince me that I exist, or that I hold an object in my hand which I call a pen; but I need evidence to convince me that there are inhabitants in India, or that there is a cycle of spots presented in the sun's rotation. In regard to this class of truths I am entitled — nay, required — to ask the *why*. Not only so; if the truth urged as evidence is not self-evident, I may ask the *why* of the *why*, and the *why* of that *why*, on and on, till we come to a self-evident truth, when the *why* becomes unintelligible. Now we may say of the one class of truths that they depend (to us) on no condition, and call them Unconditioned; whereas we must call the other Conditioned, for our rational nature demands another truth as a condition of our assenting to them.

But this is not precisely what is meant, or all that is meant, by

conditioned and unconditioned in philosophic nomenclature. We find that not only does one truth depend on another as *evidence* to our minds, but one thing as an *existence* depends on another. Everything falling under our notice on earth is dependent on some other thing as its cause. All physical events proceed from a concurrence of previous circumstances. All animated beings come from a parentage. But is everything that exists thus a dependent link in a chain which hangs on nothing ? There are intellectual instincts which recoil from such a thought. There are intuitions which, proceeding on facts ever pressing themselves on the attention, lead to a very different result. By our intuitive conviction in regard to substance, we are introduced to that which has power of itself. True, we discover that all mundane substances, spiritual and material, have in fact been originated, and have proceeded from something anterior to them. But then intuitive reason presses us on, and we seek for a cause of that cause which is furthest removed from our view. It is a favorite principle with Aristotle that there cannot be an infinite series of causes ; see, in particular, *Metaph.* I. Minor, II., where he supports his doctrine by very subtle reasoning. The principle has been sanctioned by most profound thinkers ; see Clarke, *Demons. of Being and Attrib. of God*, II., where the proposition is supported by very doubtful metaphysics. I am inclined to think we come to the principle by finding that in following various lines we come to a stop ; particularly, in following substance and quality, we come to self-existent substance. Pursuing various lines, external and internal, we come to a substance which has no mark of being an effect; to a substance who is the cause, and, as such, the intelligent cause, of all the order and adaptation of one thing to another in the universe ; who is the founder of the moral power within us, and the sanctioner of the moral law to which it looks, and who seems to be that Infinite Existence to which our faith in infinity is ever pointing, — and now the mind in all its intuitions is satisfied. The intuitive belief as to power in substance is satisfied ; the intuitive belief in the adequacy of the cause to produce its effects is satisfied ; the native moral conviction is satisfied ; and the belief in infinity is satisfied. True, every step in this process is not intuitive or demonstrative, — there may be more than one experiential link in the chain ; but the intuitive convictions enter very largely; and when experience has furnished its quota, they are gratified, and feel as if they had nothing to demand beyond this One Substance possessed of all power and of all perfection.

If we would avoid the utmost possible confusion of thought, we must distinguish between these two kinds of conditioned and unconditioned: the one referring to human knowledge, and the discussion of it falling properly under Gnosiology; the other to existence, and so falling under Ontology. The conditional, in respect of knowledge, does, if we pursue the conditioned sufficiently far, conduct at last to primary truths, which are to us unconditioned. These are the first truths which we have been seeking to seize and express in this treatise. We cannot be made to think or believe that these primary truths should not be positive truths, and regarded as truths by all other beings capable of comprehending them. But it is to be carefully remarked, and ever allowed, that some of those truths which are original and independent to us, may be seen by higher intelligences to be dependent on, or to be necessarily interlinked with, other truths. We may by patient induction ascertain what are to us unconditioned truths; but it would be presumptuous in us to pretend to determine what truths are so in themselves, and are seen to be such by the omniscient God. Again, as to conditioned and unconditioned existence, it is quite clear that nothing falls under our notice in this world which is absolutely unconditioned. But the intuitive convictions of the mind, proceeding on a few obvious facts, lead us by an easy process to an unconditioned Being, — that is, whose existence depends on no other.

But the question is started, Can we conceive the Unconditioned? Of truth unconditioned to us we can conceive. It consists, in fact, of that body of truths on which we are ever falling back in the last resort; in other words, of those original perceptions and principles which I have been seeking to unfold in this treatise. But can we conceive of unconditioned existence? I find no difficulty in doing so. Our intellectual and moral convictions are not satisfied till we reach underived being. I admit the word "unconditioned" is negative; it implies merely the removal of a condition. But we remove the condition, because we come to cases where our intuitive reason does not insist on it, and where our intuitive perceptions rest on underived existence. Pursuing any one of our native convictions, cognitive, fiducial, judicial, or moral, it conducts us to, and falls back on, an object of whom we have a positive conception, — that is a Being from whom all conditions are removed, and whose existence and perfections are themselves underived, while they are the source of all power and excellence in the creature.

The above may seem to some rather a prosaic account of a sub-

ject which has been lost in such high and dim speculations. But the question is, Is it the correct version? It seems rather an arbitrary use of language on the part of Sir W. Hamilton (*Metaph.* Lect. 38) to make the Unconditioned a genus including two species, the Infinite and Absolute. When the Unconditioned is referred to, let us always understand whether it means unconditioned in thought or existence.

CHAPTER V.

(SUPPLEMENTARY.)

THE ANTINOMIES OF KANT.

KANT tries to show that the speculative reason conducts to propositions which are contradictory of each other (*Kritik d. r. Vern.* p. 338). It follows that it cannot be trusted in any of its enunciations. Kant extricates himself from the practical difficulties in which he was thereby involved, by declaring that the speculative reason was not given to lead us to positive objective truth, and by appealing from it to the practical reason. It is, however, always competent to the sceptic to maintain that, if the speculative reason deceive us, so also may the practical reason. The doctrine which I hold is, that the reason does not lead directly nor consequentially to any such contradictions. In regard to some of the counter-propositions, Reason seems to me to say nothing on the one side or the other. In regard to others, there seem to be intuitive convictions, but the contradiction arises from an erroneous exposition or expression of them. It is of course easy, on such abstruse subjects, to construct a series of propositions which may seem to be contradictory, or in reality be contradictory, — if they have a meaning at all. But these propositions will be found not to be the expression of the actual decisions of the mind. Let us examine the contradictions which are supposed to be sanctioned by reason. I am to content myself with looking at the propositions themselves, without entering on the elaborate demonstrations of them by Kant. These demonstrations proceed on the peculiar Kantian principles in regard to phenomena, space, time, and the nature of the relations which the mind can discover, and these I have been seeking to undermine all throughout this treatise. It will be enough here to show that Intuitive Reason sanctions no contradictions on the topics to which Kant refers.

FIRST ANTINOMY.

The world has a beginning in time, and is limited in regard to space.	The world has no beginning in time, and no limits in space, but is in regard to both infinite.

Now upon this I have to remark, first, that as to the "world," we have, so far as I can discover, no intuition whatever. We have merely an intuition as to certain things in the world, or, it may be, out of the world. Our reason does declare that space and time are infinite, but it does not declare whether the world is or is not infinite in extent and duration. We shall find under another antinomy what is our conviction as to God. Reason does not declare that space or time, or the God who inhabits them, must be finite.

SECOND ANTINOMY.

Every composite substance consists of simple parts, and all that exists must either be simple or composed of simple parts.	No composite thing can consist of simple parts, and there cannot exist in the world any simple substance.

Our reason says nothing as to whether things are or are not made up of simple substances. Experience cannot settle the question started by Kant in one way or other. We find certain things composite ; these we know are made up of parts ; but we cannot say how far the decomposition may extend, or what is the nature of the furthest elements reached.

THIRD ANTINOMY.

Causality, according to the laws of nature, is not the only causality operating to originate the phenomena of the world ; to account for the phenomena we must have a causality of freedom.	There is no such thing as freedom, but everything in the world happens according to the laws of nature.

Here I think reason does sanction two sets of facts. One is the existence of freedom : the other is the universal prevalence of some sort of causation, which may differ, however, in every different kind of object. These may be so stated as to be contradictory. But our convictions in themselves involve no contradiction : it is impossible to show that they do by the law of contradiction, which is that "A

is not Not-A." "There is some sort of causation even in voluntary acts;" and "the will is free;" no one can show that these two propositions are contradictory.

FOURTH ANTINOMY.

There exists in the world, or in connection with it, as a part or as the cause of it, an absolutely necessary being.	An absolutely necessary being does not exist, either in the world or out of it, as the cause of the world.

Our reason seems to say that time and space must have ever existed and must exist. When a God is found, by an easy process the mind is led by intuition to trace up these effects in nature to him as the underived substance. No contradictory proposition can be established either by reason or experience.

A little patient investigation of our actual intuitions will show that all these contradictions, of which the Kantians and Hegelians make so much, are not in our constitutions, but in the ingenious structures fashioned by metaphysicians to support their theories.

CHAPTER V.

(SUPPLEMENTARY.)

ON THE RELATIVITY OF KNOWLEDGE.

Sir William Hamilton has not always been successful, as it appears to me, in fusing what he adheres to in the realism of Reid with what he has adopted from the forms of Kant. His own special theory is that of Relativity, which acknowledges a reality, but declares that we can never know it except under modifications imposed by our minds. It can be shown, I think, that there is a doctrine of relativity which has been proceeded upon, and expressed, though commonly in a loose way, by nearly the whole chain of philosophers from the earliest ages of reflective thought down to the time when Schelling and Hegel propounded the philosophy of the absolute, which has been overthrown by Hamilton. But it cannot be proven that the great body of metaphysicians would have acknowledged the peculiar doctrine of the Scottish philosopher. There is evidently a

true doctrine of relativity, if only we could express it accurately. It should be admitted: (1.) That man knows only so far as he has the faculties of knowledge; (2.) That he knows objects only under aspects presented to his faculties; and (3.) That his faculties are limited, and consequently his knowledge limited, so that not only does he not know all objects, he does not know all about any one object. It may further be allowed: (4.) That in perception by the senses, we know external objects in a relation to the perceiving mind. But while these views can be established in opposition to the philosophy of the absolute, it should ever be resolutely maintained on the other hand: (1.) That we know the very thing; and (2.) That our knowledge is correct so far as it goes. We admit a subtle scepticism when we allow, with Kant, that we do not know the thing itself, but merely a phenomenon in the sense of appearance; or, with Hamilton, that we perceive merely the relations of things. I have endeavored to show that the mind begins with the knowledge of things, and is thence able to compare things (see *supra*, p. 58). A still more dangerous error follows where it is affirmed that our knowledge is always modified by the percipient mind, and that we add to the object something which is not, or at least may not, be in it (see *supra*, pp. 28, 29).

Dr. Mansel, in his able and learned *Bampton Lectures*, has applied this doctrine of relativity to the knowledge of God, with the view of undermining, which he has successfully done, the theology of the absolute. I am prepared to show, by a large collation of passages, that the great body of Christian divines have maintained two important points in regard to our knowledge of God. One is that man cannot rise to a full knowledge of God, and that there is much in God which we cannot know. This arises, they show, from the greatness of God, on the one hand, and the weakness of man on the other. But they also hold as another point, that man may truly know God by the light of nature, and still more specially by the light of revelation. No doubt they differ in the language which they employ to set forth their views; their mode of statement and illustration is often vague and loose; and they frequently employ the phrases and distinctions of philosophic systems whose day has long gone by. Still it can be shown that they meant to set forth both these truths. To quote only a few passages from the Fathers: Irenæus is translated, "Invisibilis quidem poterat eis ipse (Deus) propter eminentiam: ignotus autem nequaquam propter providentiam" (*Contra Omnes Hæret.* ii. 6). Tertullian says: "Deus ignotus esse non

debuit" (*Adv. Marcionem*, iii. 3). In like manner Lactantius: "Deus igitur noscendus est in quo solo est veritas" (*De Ira*, i.). Augustine illustrates what we can know of God thus: "Aliud est enim videre, aliud est totum videndo comprehendere" (*Epist. Class.* iii. 21; see another passage, *supra*, p. 138). The great body of Christian divines have certainly not maintained: (1.) That God can be known only under forms or modifications imposed by the thinking mind; (2.) That our idea of God's eternity and omnipresence is simply negative; or (3.) That man has a faith in an infinite God, with no corresponding knowledge or idea. I admit, at the same time, that there have been some respectable theologians holding a doctrine somewhat like that of Hamilton and Mansel. In particular, Bishop Peter Browne maintains that the true and real nature of God and his attributes is "utterly incomprehensible and ineffable;" but then he acknowledges that the Fathers did not lay down the distinction on which he proceeds, nor "pursue it logically through all the particulars of our knowledge, human and divine;" and he complains in his work on *The Procedure, Extent, and Limits of the Human Understanding*, 3d edit., that, so far from his views being generally received, now, twenty-five years after their publication, "the many pious and learned defenders of the faith either declined proceeding on the foundation there laid, or have generally given only some general, short, and imperfect hints of the analogy."

CHAPTER VI.

(SUPPLEMENTARY.)

EXAMINATION OF MR. J. S. MILL'S METAPHYSICAL SYSTEM.

By far the ablest opponent of intuitive truth in this country, in our day, is Mr. John Stuart Mill. It will be necessary to examine his own metaphysical system: I speak thus because he has in fact a metaphysics underlying his whole logical disquisitions. He says, indeed, in the introduction to his *Logic*, that "with the original data or ultimate premises of our knowledge, with their number or nature, the mode in which they are obtained, or the tests by which they may be distinguished, logic in a direct way has, in the sense in which I

conceive the same, nothing to do." Yet Mr. Mill is ever and anon diving down into these very topics, and uttering very decided opinions as to our knowledge of mind and body, as to the foundation of reasoning and demonstrative evidence, and as to our belief in causation. This I exceedingly regret; the more so that his logic in topics remote from first principles is distinguished for masterly exposition, for great clearness, and practical utility. If it be answered that a thorough logic cannot be constructed without building on the foundations which metaphysics supply, then I have to regret that Mr. Mill's metaphysics should be so defective. His philosophy might seem to be that of Locke ; but in fact it omits many truths to which Locke gave prominence, as, for example, the high function of intuition. Mr. Mill's metaphysical system is that of the age and circle in which he was trained ; it is derived in part from Dr. Brown, and his own father, Mr. James Mill, and to a greater extent from M. Comte.

The only satisfactory metaphysical admission of Mr. Mill is, "Whatever is known to us by consciousness is known beyond the possibility of question" (*Logic*, Introd.). What does this admission amount to? First, as to self, or mind, he says, "But what this being is, although it is myself, I have no knowledge, other than the series of its states of consciousness." As to body, he says the reasonable opinion is that it is the "hidden external cause to which we refer our sensations" (*Logic*, I. iii. 8). Sensation is our only primary mental operation in regard to an external world ; and perception is discarded "as an obscure word" (compare *Dissertations*, Vol. I. p. 94). "There is not the slightest reason for believing that what we call the sensible qualities of the object are a type of anything inherent in itself, or bear any affinity to its own nature." "Why should matter resemble our sensations?" (*Logic*, I. iii. 7). Speaking of bodies, and our feelings or states of consciousness, he says : "The bodies, or external objects which excite certain of these feelings, together with the powers or properties whereby they excite them, — these being included rather in compliance with common opinion, and because their existence is taken for granted in the common language, from which I cannot deviate, than because the recognition of such powers or properties as real existence appears to be warranted by a sound philosophy." It is curious to see how extremes meet. Mr. Mill seems in every way the opponent of the Kantian school. Yet he quotes with approbation and evident delight the words of Sir W. Hamilton, "All that we know is therefore phenomenal, phenomenal of the unknown" (I. iii. 7).

I have to ask my readers to compare this philosophic system with the account I have submitted in this treatise, and judge for themselves in the light of consciousness. He admits that whatever is known by consciousness is beyond possibility of question ; but I hold that by consciousness we know much more than he admits. He allows that we know "Feelings," — the favorite but most inadequate language of the French sensationalists and of Brown. I maintain that our consciousness is of Self as Feeling, and not of Feelings separate from Self. If he ask me to define Self, which I maintain that we thus know, I ask him to define Feeling, which he acknowledges that we thus know. It will then be seen that neither can be defined, because both are original perceptions of consciousness. He admits as indisputable only what we are conscious of. I maintain that we must admit all we intuitively know, and that we know body immediately. Mr. Mill, following Brown, maintains that we know body by inference, as the cause of what we feel. Brown can get the inference; for he holds resolutely by the doctrine that we intuitively believe that every effect has a cause ; and discovering phenomena in us which have no cause in us, he seeks for a cause without us. This process would, I think, leave the external world an unknown thing, and could never give us a knowledge of extension (which not being in the effect we could not place in the cause) ; still we might thus argue that an external world existed. But how can Mr. Mill, who denies intuitive causation, get the external world at all? Where, indeed, is he to get even his causation as an experiential law? For in a mind shut up darkly from all direct knowledge of anything beyond, the most common phenomena must be sensations and feelings of which we can never discover a cause, or know that they have a cause. Kant saved himself from the consequences of his speculative system by calling in the Practical Reason; and Hamilton accomplished the same end by calling in Faith. I think that these great men were entitled to appeal to our moral convictions and to our necessary faiths. These I hold to be beyond dispute, no less than our consciousness or our feelings. But Mr. Mill makes no such appeal to save him from the void ; and he abstains from expressing any opinion as to the great fundamental religious truths which men have in all ages intertwined with their ethical principles, and from which they have derived their brightest hopes and deepest assurances. He is silent on these subjects, as if, on the one hand, unwilling to deny them, and as if he felt, on the other hand, that by his miserably defective philosophic principles he had left himself no ground on which to build them.

Mr. Mill's derivative logic is admirable; but it is difficult to find what the final appeal is to be. "There is no appeal from the human faculties generally; but there is an appeal from one faculty to another, from the judging faculty to those which take cognizance of fact, the faculties of sense and consciousness" (III. xxi. 1). This would seem to make sense and consciousness the final appeal. But all that sense gives, according to him, is an unknown cause of feelings, and all that consciousness gives is a series of feelings. He says, very properly, that we should make "the opinion agree with the fact;" but he seems to leave us no means of getting at any other facts than floating feelings.

I have already noticed his defective account of our moral perception (see *supra*, p. 225), and of our belief in causation (p. 214), and I may yet have occasion to refer to his theory of mathematical axioms (*infra*, p. 348). It now only remains at this place to show that he has given an utterly erroneous account of the tests or criteria of primitive or fundamental truth. He is obliged, as for himself, to admit some sort of test. We must admit, he says, "all that is known by consciousness;" and he says there is "no appeal from the human faculties generally." I do regret that he has never patiently set himself to inquire what is the knowledge given by "consciousness," and in the testimonies of the "faculties generally." This would have led him to truths which he ignores, or contemptuously sets aside. He examines the views of the defenders of necessary truth on the supposition that the test of such truth is that "the negation of it is not only false but inconceivable" (*Logic*, II. v. 6). He then uses the word "inconceivable" in all its ambiguity of meaning. By "conceivable" he often means that which we can apprehend, or of which we may have an idea, in the sense of an image: "When we have often seen or thought of two things together, and have never in any one instance either seen or thought of them separately, there is, by the primary law of association, an increasing difficulty, which may in the end become insuperable, of conceiving the two things apart." He then proceeds to show that what is inconceivable by one man is conceivable by another; that what is inconceivable in one age may become conceivable in the next. "There was a time when men of the most cultivated intellects, and the most emancipated from the dominion of early prejudice, would not credit the existence of antipodes" (ii. v. 6). I acknowledge that the tests of intuition have often been loosely stated, and that they have also been illegitimately applied; just as the laws of derivative logic have been. But they

have seldom or never been put in the ambiguous form in which Mr. Mill understands them; and it is only in such a shape that they could ever be supposed to cover such beliefs as the rejection of the rotundity of the earth. The tests of intuition can be clearly enunciated, and can be so used as to settle for us what is intuitive truth. It is not the power of conception, in the sense either of phantasm or notion, that should be used as a test, but it is self-evidence with necessity; the necessity of cognition, if the intuition be a cognition; the necessity of belief, if it be a belief; the necessity of judgment, if it be a judgment. There was a time when even educated men felt a difficulty in *conceiving* the antipodes, because it seemed contrary, not to intuition, but to their limited experience; but surely no one knowing anything of philosophy, or of what he was speaking, would have maintained, at any time, that it was self-evident that the earth could not be round, and that it was impossible, in any circumstances, to believe the opposite. The tests of intuition, clearly announced and rigidly applied, give their sanction only to such truths as all men have spontaneously assented to in all ages.

CHAPTER VII.

(SUPPLEMENTARY.)

THE NESCIENCE THEORY. — MR. HERBERT SPENCER.

In the reaction against the high ideal or à priori philosophy of the past age, we run a considerable risk of sinking into a systematic Nescience, in the darkness of which there may be quite as much rash speculation as in the empyrean of transcendentalism. Sir W. Hamilton, who did so much to overthrow the Philosophy of the Absolute, has unfortunately prepared the way for this other extreme. Comparing the two philosophies, he says: "In one respect both coincide; for both agree that the knowledge of Nothing is the principle or result of all true philosophy: —

Scire Nihil, — studium, quo nos lætamur utrique.

But the one openly maintaining that the Nothing must yield every-

thing is a philosophic omniscience; whereas the other holding that Nothing can yield nothing is a philosophic nescience. In other words, the doctrine of the Unconditioned is a philosophy confessing relative ignorance, but professing absolute knowledge; while the doctrine of the conditioned is a philosophy professing relative knowledge, but confessing absolute ignorance" (*Discus.* App. I. Philos. A). Dr. Mansel has applied the principles of Hamilton to the overthrow of the Absolute Theology which, he shows, has involved itself in inextricable inconsistencies and contradictions. But it was seen by all men capable of looking at consequences, that the doctrine might be turned to far different purposes. Mr. Herbert Spencer, in his *First Principles*, professes to build on the ground furnished to him by Hamilton and Mansel, and has reached results which they would disavow. It remains for the school of Hamilton to show whether this can be done with logical consistency. He justly observes that "it is rigorously impossible to conceive that our knowledge is a knowledge of appearances only, without at the same time conceiving a reality of which they are appearances; for appearances without reality is unthinkable" (p. 88). But then he maintains that this Reality beyond the appearances is and must forever remain unknown to man. Nor is his general doctrine much improved by his allowing that "besides definite consciousness there is an indefinite consciousness which cannot be formulated," for this *indefinite* thing is only the *faith* and *negative* judgments of Hamilton in a still vaguer form. He reckons it the province of science to master the known appearances; and he allots to religion the sphere of unknown realities, "that unascertained something which phenomena and their relations imply" (p. 17). This is the "fundamental verity," "common to all religions," "the ultimate religious truth of the highest possible certainty," that "the Power which the universe manifests to us is utterly inscrutable." He quotes with approbation the language of Hamilton about its being the highest effort of thought to erect an altar "to the unknown and unknowable God;" and as to this unknown he thinks it right "to refrain from assigning to it any attributes whatever, on the ground that such attributes, derived as they must be from our own natures, are not elevations but degradations" (p. 109). Looking to the interests both of philosophy and religion, it is of great moment to lay an arrest on this style of thought, — quite as important as it was to stay in last age the now exploded Philosophy of the Absolute. I meet it by maintaining as the proper postulate, sanctioned by consciousness, that the mind be-

gins with a knowledge of things, partial no doubt, but still correct so far as it goes. From this primitive knowledge and adhering beliefs it reaches further knowledge. In particular, the real effects in nature carry us up to a real cause. The evidences of design argue an adequate cause in an intelligent designer, and the nature of the moral power in man and of the moral government of the world is proof of the existence of a Moral Governor. "The invisible things of him from the creation of the world are clearly seen, being understood (*νοούμενα*) by the things that are made, even his eternal power and Godhead." Should it come to be thought that religion has only the sphere of the "unknown and unknowable," I am sure it would disappear from our world as a living power. When the apostle beheld the altar with the inscription, "To the Unknown God," he hastened to proclaim a Known God: "Whom therefore ye ignorantly worship, him declare I unto you. God that made the world," etc.

Mr. Spencer, in his *Psychology*, insists that we seek an Ultimate Datum or Postulate. He finds such a Postulate in *Belief*. He does not very distinctly explain what is involved in belief. He says (p. 14) that "belief is the recognition of existence." If he had left out the *re* as implying something prior brought back, and said *cognition*, his statement would have been correct. Again, he says, "Every logical act of the intellect is a predication, is an assertion that something is, and this is what we call belief." I do not admit that all cognition is predication (see *supra*, p. 182), but taking his explanation, I ask my readers to consider how much is implied in this predication that something is, in this cognition of existence; and the postulate, if it is not unmeaning, or if its meaning is not suicidal, must postulate all that is in it, must postulate existence and something existing. I maintain, further, that a something can be known as existing only so far as we know it to be something, that is, know something of it, that is, know some quality of it. Setting out with something, I hold that all the consequences logically drawn also imply existence, and something existing with some quality. By such a process we find ourselves reaching further knowledge and other realities. Mr. Spencer, quite in the spirit of the German speculatists, will admit only one ultimate postulate; what he calls belief. On the ground on which he calls in the one, I think, he is bound to admit others, — what I call beliefs and judgments, intellectual and moral. By these, and by ordinary observation, we rise to a God who is not an unknown God.

He says (p. 28): "Not only is the invariable existence of a belief

our sole warrant for every truth of immediate consciousness, and for every primary generalization of the truths of immediate consciousness, every axiom, but it is our sole warrant for every demonstration." There is surely some confusion of statement here. I will not insist on the circumstance that generalization must imply a discursive process. I remark upon the principle that invariable existence is the warrant of the truths of immediate consciousness. I should rather say, that the belief invariably exists, since we have in sense-perception and self-consciousness the object before us, and we perceive it. According to Mr. Spencer (p. 27), "In the proposition 'I am,' no one who utters it can find any proof but the invariable existence of the belief in it." I should rather say, that the belief is so invariable since all men have invariably the object self under their view. Mr. Spencer lays down the further principle (p. 26), "The inconceivability of its negation is the test by which we ascertain whether a given belief invariably exists or not;" and then in the application he uses the word "conceiving" (with its derivatives) in all its various meanings, as imaging, apprehending in a notion, knowing, believing, judging. He says acutely, in criticising Hume (p. 49), "For what is contained in the concept, — an impression? Translate the word into thought, and there are manifestly involved a thing impressing and a thing impressed. It is impossible to attach any idea to the word save by the help of these two other ideas." Now, I ask him to translate in the same manner his own language, and it will imply a thing cognizing, and an existing thing cognized. Negation may no doubt be used as a test, but it is a secondary one, throwing us back on the primary one of self-evidence; and the negation used as a test must not be of conception, but the impossibility of not knowing when the primitive conviction is a cognition, of not believing when it is a belief, and of not judging in a particular way when it is a comparison. Such tests carry us on from primary knowledge to further knowledge, embracing the existence of God.

It does not concern us in this treatise to examine Mr. Spencer's ambitious attempt to explain the formation of the present state of the cosmos, by means of an unknown Infinite necessitated by thought, and certain forces. It could easily be shown that there are tremendous chasms in the process which he has unfolded. The forces which he is obliged to postulate may so far account for certain physical phenomena, such as the size, shape, and movements of the planets. But they give no explanation of sensation, or emotion, or consciousness, or belief, or intuition, or judgment, or the sense of beauty, or reason-

ing, or desire, or volition. Great as are the author's intellectual powers, he has attempted a task far beyond them, — I believe beyond human capacity, certainly far beyond it at the present stage of science. The attempt by this giant mind to reach an unapproachable height, by heaping Ossa on Pelion, must turn out a lamentable failure. This in regard to his theory as a whole; but his bold generalizations are always suggestive, and some of them may in the end be established as the profoundest laws of the knowable universe.

BOOK IV.

METAPHYSICS IN THE VARIOUS SCIENCES.

CHAPTER I.

METAPHYSICS IN THE COMMON AFFAIRS OF LIFE.

THE act of breathing does not make us physiologists. Nor does the use of First Principles make us metaphysicians. Just as we all use physiological, so do we also employ metaphysical principles without being conscious of it. Our primitive cognitions, beliefs, and judgments are involved in what we think and do from day to day and from hour to hour, almost from minute to minute of our waking existence.

We assume that we are in space and move in it. We act on the principle that the shortest distance between two points is a straight line. The farmer does not attempt to close in a field by two straight lines. We carry with us a conviction of our personality. We trust our memories and believe in the continuity of time and can find no limit to it. We proceed on the being and identity of objects, especially our personal identity. We are constantly separating parts and combining them into wholes. We delight to discover resemblances and to view things in classes. We are ever comparing the sizes of objects and observing their proportions. We delight to notice the activities of things, and we perceive that they influence us and have power over each other. Whenever we will to take a step in walking or to utter

a sound, we are employing the principle of cause and effect.

Our consciences are constantly guiding and guarding us, in doing this honest and declining this base transaction. When we talk, or when we write, there is a constraint constantly laid upon us by the principle that we should speak the truth. In our money transactions we are bound by the fixed principle of honesty. On seeing a human being in distress, the royal law of love requires that we hasten to relieve him. Our moral nature, following the law of love regulated by law, insists on our constantly showing kindness to our families, our friends, and neighbors.

All this does not show that we are metaphysicians, but it proves that we are constantly exercising qualities which the metaphysician should observe.

CHAPTER II.

THE METAPHYSICS OF PHYSICS.

We have heard of the man in the French play who was amazed to find that he had been speaking prose all his life without knowing it. I believe that in like manner physicists are constantly using metaphysics without having the least suspicion of it; many of them would indignantly repel the charge, if brought against them.

The physical sciences must ever be conducted in the method of induction, with sense and artificial instruments as the agents of observations. But it has often been remarked that all scientific investigation, indeed all inquiry, if pursued sufficiently far down, conducts into mystery, often into insoluble problems. It will be found that these are the underlying regulative principles which the metaphysician should seek, if not to explain, at least to express. It is not the special business of the physical sciences to inquire into the nature or guarantee of ultimate truths. This work it leaves very properly to metaphysicians, who should be prepared to announce laws of intuition on which the physicist might rest, when he finds himself sinking too far down. They might be more profitably employed in such a work, which lies exclusively in their own province, than in pursuing wild speculative ends, which can never be attained by human reason.

The powers in nature are so distributed and arranged that they issue in order, in respect of such qualities as space, time, quantity, and energy. To these mathematics can be successfully applied, and they come in with

all their axioms and demonstrations, which are seen to be true at once, as will be shown in a later chapter. Thus both in statics and dynamics, in certain departments of mechanics, astronomy, optics, and thermotics, we come down in the last resort to truths which are beneath physics, and within metaphysics.

Most, if not all, of our intuitive convictions, have a place in the foundation of the deeper physical sciences. Thus the conviction as to the identity of being leads us to chase the substance through the various forms it may assume, and constrains those who are most opposed to hypotheses to speak of ultimate atoms or molecules. The intuition of whole and parts constrains us to look on the abstract as implying the concrete, and prompts us to seek for all the parts which make up the whole. Our intuition as to classes insists that the species make up the genus. Our primitive perceptions as to space make the physicist certain, when he sees a body now in one place, and then in another, that it must have passed through the whole intermediate space. They should prevent him from giving his adherence to the theory that matter consists merely of points of force; the points cannot, properly speaking, be unextended, and there must always be a space between them. Our belief as to time assures us that there can be no break in its flow, and that when we fall in with the same object at two different times, it must have existed the whole intervening period. Our intuitive cognitions of number, quantity, and proportion guide and control us more or less formally in all departments of natural philosophy. Our conviction as to substance and property prompts the physicist, when he discovers a new object, to inquire after its properties, and on perceiving the action of such agencies as magnetism, electricity, and galvanism, to declare that

they must be either separate substances (not probable), or properties of substances. Causation appears in nearly every department of science.

There are sciences which have special primitive truths underlying them. Thus chemistry involves throughout our conviction as to substance and property. There is a class of sciences which proceeds on resemblances and deals with things in classes. They have been called the "Classificatory Sciences" by Whewell, and embrace botany, zoölogy, and mineralogy so far as it is not a branch of chemistry, and geology so far as it deals with organisms. In all these the mind is guided and guarded by our cognitions in regard to the relations of individuals and classes. Power, force, energy, causation operate in almost all physical sciences, in electric, magnetic, and galvanic action, which all imply power; in geology, as it treats of the forces which have brought the earth's surface to its present state; in physiology which looks at the powers which work in the organism. It is the reigning determinant in mechanics and in the old natural philosophy now called physics.

The physical investigator, engrossed with external facts, and seeking to throw light upon them, will seldom so much as notice these underlying principles, which are unconsciously guiding him, and only on rare occasions will he make a formal appeal to them. Still there will be times when those most prejudiced against metaphysics of every kind will be tempted or compelled to fall back upon them, — when diving down into the depths of a deep subject, or when hard pressed by an opponent. It often happens that when they do so, their expression of the principle is awkward and blundering; and I think they have reason to complain of the metaphysician that he has been wasting his ingenuity in unprofitable and un-

attainable pursuits, and has done so little to aid physical investigation in a line in which he might have lent it effective and profitable aid.

It has been shown by Dr. Whewell, in his work on the *Philosophy of the Inductive Sciences*, more particularly in his *History of Scientific Ideas*, that each kind of science has its special fundamental idea at its basis, and he classifies the sciences according to the ideas which regulate them. The phrase "ideas" does not seem a good one to express the intuitive convictions of the mind, either in their spontaneous exercises or formal enunciations, and I think he is altogether wrong in supposing that these ideas "superinduce" on the facts something not in the facts. But he has in that work developed truths, which physical investigators were almost universally overlooking.

CHAPTER III.

THE METAPHYSICS OF MATHEMATICS.

MATHEMATICS is not a metaphysical science. But it proceeds by definitions and axioms in both of which metaphysics are involved (*a*).

I look upon definitions, or rather the things defined, as constituting, properly speaking, the foundation of mathematics. They seem to me to be formalized primitive cognitions or beliefs in regard to quantity, to which some add position; and they specially bear upon extension and number. In their formation there is involved a process of abstraction from material objects presenting themselves. A point is defined "position without magnitude." There is no such point; there can be no such point. A line is "length without breadth;" there was never such a line drawn by pen or diamond point. But the mind in analysis is sharper than steel or diamond. It can contemplate position without taking extension into view. It can reason about the length of a line without regarding the breadth. In all definitions there is abstraction, but I must forever protest against the idea that an abstraction is necessarily unreal. If the concrete is real the attribute or part of it is also real. The position of the point is a reality, and so also is the length of a line; they are not independent realities, and capable of existing alone and apart, but still they are realities, and when the mind contemplates them separately, it contemplates realities. So far as it reasons about them accurately, according to the laws of thought, the conclusions arrived

at will also be real, the reality being of the same nature with that of the premise. Thus, whatever conclusions are reached in regard to lines, circles, or ellipses will apply to all objects having length, or a circular, or elliptic form. We find, in fact, that the conclusions of mathematics do hold true of all bodies in earth or sky, so far as we find them occupying space or having numerical relations.

Looking not just at the definitions, but at the things defined under the clear and distinct aspects in which they are set before it by abstraction, the mind discovers relations and can draw deductions. It finds that A is equal to B, and B to C, and it at once concludes that A is equal to C. In doing this it proceeds on a principle, and this when generalized becomes the axiom that "things which are equal to the same thing are equal to one another." The reasoning in such cases appears clear, anterior to the general principle being announced, and when the principle is expressed it does not seem to add to the force of the ratiocination. It does not in fact add to the cogency of the argument; it is merely the expression of the general principle on which it proceeds. Still it serves many important scientific purposes. Locke and Stewart, who do not set high value on axioms, admit that it is of great importance to have the general truth expressed formally in an axiom. It allows the reflective mind to dwell on the general law regulating the spontaneous conviction; by its clearness it enables us to test the ratiocination, and it shows what those must be prepared to disprove who would dispute or deny the conclusion.

If this view be correct, the abstracted cognitions or beliefs which constitute the definitions form the proper foundation of mathematical demonstration, while the

axioms being the generalizations of our primitive judgments, on looking at the things defined, are the links which bind together the parts of the superstructure added (*b*).

The question is keenly agitated as to axioms whether they are or are not the generalizations of experience. It will be found here, as in so many other questions which have passed before us, that there is truth on both sides, and error on both sides, and confusion in the whole controversy, which is to be cleared by an exact account of the mental operation involved in forming the judgment. The mathematical axiom is not a mere generalization of an outward or a gathered experience. It is not by trying two straight rods, ten, twenty, or a thousand times, that we arrive at the general proposition that two straight lines cannot enclose a space, and thence conclude as to two given lines presented anywhere to us that it is impossible they should enclose a space. It is certainly not by placing two rods parallel to each other, and lengthening them more and more, and then measuring their distance to see if they are approaching, that we reach the axiom that two parallel lines will never meet, and thence be convinced as to any given set of like lines that they will never come nearer each other. Place before us two new substances, and we cannot tell beforehand whether they will or will not chemically combine ; but on the bare contemplation of two straight lines, we declare they cannot contain a space ; and of two parallel lines, that they can never meet (*c*).

In mathematical truth, the mind, upon the objects being presented to its contemplation, at once and intuitively pronounces the judgment. It conceives two straight lines, and decides that they cannot be made to enclose a space. But it would pronounce the same de-

cision as to any other, as to every other pair of straight lines, and thus reaches the maxim that what is true of these two lines is true of all. There is thus generalization in the formation of the axiom, but it is a generalization of the individual intuitive judgments of the mind. Hence arises the distinction between the axioms of mathematics and the general laws reached by observation. If we have properly generalized the individual conviction, the necessity that is in the individual goes up into the general, which embraces all the individuals, and the axiom is necessarily true, and true to all beings. But we can never be sure that there may not somewhere be an exception to experiential laws. We are sure that two straight lines cannot enclose a space in any planet, or star, or world, that ever existed or shall exist; but it is quite possible that there may be horned animals which are not ruminant, or white crows in some of the planets; and that there may come a time when the sun shall no longer give heat or light.

In the case of our intuitive convictions regarding space, number, and quantity, the simplicity of the objects makes it easy for us to seize the principle, and to put it in proper formulæ, which can scarcely fail to be accurately made. Hence these convictions came to be expressed in general forms — in what were then called Common Notions — at a very early age of the history of intellectual culture. The disputes among mathematicians in regard to axioms relate not to their certainty and universality, but to the forms in which they ought to be put, and as to whether what some regard as first truths may not be demonstrated from prior truths. Such, for instance, is the dispute as to how the axioms and demonstrations as to parallel lines should be best constructed. But in regard to our convictions of extension,

number, and quantity, it is not difficult to gather the regulating principle out of the individual judgments. It is different with other of our original convictions, such as those which relate to cause and effect; the greater complexity of the objects renders it more difficult to seize on the principle involved, and there is greater room for dispute as to any given formula whether it is an exact expression of the facts. We see the reason why we cannot have demonstration in such sciences as physics and ethics; it is because of the concreteness and complexity of the objects. The problem of "three bodies" has been found a difficult one; how much more perplexing must be one in which there are a considerable number and variety of concrete things to be considered.

(*a*) It has been shown by Kant that the axioms of geometry are synthetic and not analytic judgments. Thus, in the axiom, "Two straight lines cannot enclose a space," the predication that "they cannot enclose a space," is not contained in the bare notion of "two straight lines." Starting with axioms which involve more than analytic judgments, we are reaching throughout the demonstration more than identical truth. The propositions in the Books of Euclid are all evolved out of the definitions and axioms, but are not identical with them, or with one another (*Kritik*, p. 145). Dr. Mansel (*Proleg. Log.* 2d ed. p. 103) maintains that such axioms as that "Things which are equal to the same are equal to each other" are analytic. But does not this confound equality with identity? D. Stewart remarks (*Elem.* Vol. II. Chap. ii.) that most of the writers who have maintained that all mathematical evidence resolves ultimately into the perception of identity "have imposed on themselves by using the words *identity* and *equality* as literally synonymous and convertible terms. This does not seem to be at all consistent, either in point of expression or fact, with sound logic." Certain modern logicians have fallen into a still greater confusion, when they make the relation between subject and predicate merely one of identity or of equality. The proposition "Man is mortal" is not interpreted fully when it is said "Man is identical with some mortal," or that "All men = some mortals." By all means let logicians use symbols,

but let them devise symbols of their own, and not turn to a new use the symbols of mathematics, which have a meaning, and a well-defined one, simply as applied to quantity, and should not be made to signify the relations of extension and comprehension in logical propositions.

(*b*) There is truth, then, in a statement of D. Stewart: "The doctrine which I have been attempting to establish, so far from degrading axioms from that rank which Dr. Reid would assign them, tends to identify them still more than he has done, with the exercise of our reasoning powers; inasmuch as, instead of comparing them with the *data*, on the accuracy of which that of our conclusion necessarily depends, it considers them as the *vincula* which give coherence to all the particular links of the chain; or (to vary the metaphor) as *component elements*, without which the faculty of reasoning is inconceivable and impossible" (*Elem.* Vol. II. Chap. i.).

If this view be correct, we see how inadequate is the representation of those who, like D. Stewart and Mr. J. S. Mill, represent mathematical definitions as merely hypothetical, and represent the whole consistency and necessity as being between a supposition and the consequences drawn from it. This is to overlook the concrete cognitions or beliefs from which the definition is derived. It is likewise to overlook the fact that these refer to objects, and the further fact that the abstractions from the concretes also imply a reality. This theory also fails to account for the circumstance that the conclusions reached in mathematics admit of an application to the settlement of so many questions in astronomy, and in other departments of natural philosophy. Thus, what was demonstrated of the conic sections by Apollonius is found true in the orbits of the planets and comets, as revealed by modern discovery. All this can at once be explained if we suppose that the mind starts with cognitions and beliefs, that it abstracts from these, and discovers relations among the things thus abstracted: the reality that was in the original conviction goes on to the farthest conclusion.

(*c*) Mr. Mill maintains (*Logic*, II. v. 4, 5) that the proposition, "Two straight lines cannot enclose a space," is a generalization from observation, "an induction from the evidence of the senses." That observation is needed I have shown in this treatise; but there is intuition in the observation. That there is generalization in the general maxim I have also shown; but it is not a gathering of outward instances. Observation can of itself tell us that these two lines before us do not enclose a space, and that any other couplets of

lines examined by us, twenty, or a hundred, or a thousand, do not enclose a space; but experience can say no more without passing beyond its province. An intellectual generalization of such experience might allow us to affirm that very probably no two lines enclose a space on the earth, but could never entitle us to maintain that two lines could not enclose a space in the constellation Orion. Mr. Mill, in order to account for the necessity which attaches to such convictions, refers to the circumstance that geometrical forms admit of being distinctly painted in the imagination, so that we have "mental pictures of all possible combinations of lines and angles." We might ask him what he makes of algebraic and analytic demonstrations of every kind, where there is no such power of imagination and yet the same necessity. But without dwelling on this I would have it remarked, that in the very theory which he devises to show that the whole is a process of experience, he is appealing to what no experience can ever compass, "to all *possible* combinations of lines and angles." Intuitive thought, proceeding on intuitive perceptions of space, may announce laws of the "*possible* combinations" of geometrical figures; but this cannot be done by observation, by sense, or imagination. Supposing, he says, that two straight lines, after diverging, could again converge, "we can transport ourselves thither in imagination, and can frame a mental image of the appearance which one or both of the lines must present at that point, which we may rely on as being precisely similar to the reality." Most freely do I admit all this. We may "rely" on it, but surely it is not experience, nor imagination, but thought looking at things which tells us what must be at that point, and that it is a "reality." The very line of remark which he is pursuing might have shown him that the discovery of necessary spatial and quantitative relations is a judgment in which the mind looks upon objects intuitively known, and now presented, or more frequently represented to the mind.

CHAPTER IV.

THE METAPHYSICS OF FORMAL LOGIC.

METAPHYSICS and Logic are to be carefully distinguished. The former deals with First Principles, of which it seeks to give an account. The latter treats of the laws of Discursive Thought, in which we proceed from something given or allowed to something derived from it by thinking. The two, though separate, have points of connection. There are primitive truths at the basis of secondary or discursive processes. It is part of the office of Metaphysics to unfold and express these.

Logic deals with the Notion, the Proposition, and Reasoning. Each of these involves principles which are perceived to be true on the bare contemplation of the notions. Thus the Abstract implies the Concrete, and the Universal implies Singulars. Logic should take up these principles, explain, and apply them.

Logic deals with the Proposition, which may be Affirmative or Negative, Universal or Particular. In the logical use of the proposition there are involved the laws of Identity, of Contradiction, and Excluded Middle, as explained under the primitive judgment of Identity.

Reasoning may be in Extension or Comprehension. Each of these has its fundamental laws. The regulative principle of reasoning in Extension is the Dictum of Aristotle, "Whatever is true of a class is true of each member of the class." The regulating principle of reasoning in Comprehension is attributive, "All that is in an attribute is in the thing that contains the attribute," or

as Leibnitz expresses it, "Nota notae est nota rei ipsius." All these are self-evident. The metaphysician should supply these to the logician, who takes up and applies them to the various forms of reasoning, Categorical, Hypothetical, and Disjunctive. In doing this a science has been constructed which I regard as the most perfect, next to geometry.

CHAPTER V.

METAPHYSICS OF ETHICS.

THIS is the title of a work by Kant, who is much more realistic in his moral than in his speculative philosophy, and thereby has reached a larger amount of truth.

Ethics is in every respect an analogous science to Logic. The difference lies in the difference of the matters with which they deal, the one aiming to find the laws of discursive truth, the other the nature of moral good; the one seeking to attain its end by generalizing the operations of thought, the other by generalizing the exercises of the motive and moral powers of man. Ethics, like Logics, is in a sense an *à priori* science; it finds and it employs principles which are valid, independent of our experience. In another sense, it is *à posteriori*, inasmuch as these principles and their laws can be discovered by us only through observation of their individual manifestations; and thus far it is dependent on an inductive psychology. We must begin with inquiring, *Quid est?* and then we find that the thing reached relates to the *Quid oportet?* It is the special office of ethics to ascertain what is involved in the *oportet*, and apply its formulæ to the conduct of responsible beings.

Ethics is not to be regarded as a branch of metaphysics, nor should metaphysics profess to be able to construct ethics. But metaphysics should supply to ethics some of its fundamental principles. These should be accepted, clearly enunciated, and applied in ethics, but the special discussion of them should be left to the more fundamen-

tal science. I have endeavored to give a summary of the primary truths with which ethics should start. (Pp. 210–243.) They relate to moral good or virtue, which is the royal law of love, to its obligation, its relation to God and law, to its desert and relation to happiness, and its voluntary character.

But a science of ethics, in order to serve useful purpose, cannot be constructed from the mere native convictions of the mind. We do obtain a few most important general principles from this source exclusively, and these underlie the whole science, and bear up every part of it. But in order to serve the ends intended by it, ethics must settle what are the duties of different classes of persons, according to the relation in which they stand to each other, such as rulers and subjects, parents and children, masters and servants, and society in general; and what the path which individuals should follow in certain circumstances, — it may be, very difficult and perplexing. In consequence of the affairs of human life being very complicated, demonstration can be carried but a very little way in ethics. In order to be able to enunciate general principles for our guidance, or to promulgate useful precepts, the ethical inquirer must condescend to come down from his *à priori* heights to the level in which mankind live and walk and work. Even in the most practical departments of ethical science, the grand fundamental laws of our moral constitution must ever be the guiding principles, but we have to consider their application to an almost infinite variety of earthly positions and human character.

Of all the sciences, ethics is that which comes into closest relationship with Christianity and the Word of God. The reason is obvious. It deals with the law and the very character of God; it deals with man as under

law, and with man as having broken the law. It thus prepares us, if it faithfully fulfils its functions, to believe in a religion which shows us how the sinner can be reconciled to God. When the great doctrine of the Atonement is embraced, a new and most important element is introduced into ethics. It should no longer be a science constructed, on the one hand, for pure beings, nor, on the other, for persons who must ever be kept at a distance from God. This new reconciling and gracious element turns Pagan into Christian ethics; it turns a cold and legal, into a warm and evangelical obedience.

Locke thought moral philosophy could be made a demonstrative science founded on intuition, to which he gave an important place as able to perceive at once the relation of certain ideas (*Essay* B. IV. 17). I am not aware that any one has attempted thoroughly to carry out this view. Morality, like truth, has certainly self-evidence or demonstrative principles as several other sciences have. But these varied applications to actual life are so complicated that the human mind (whatever an angelic mind might do) cannot follow them deductively.

CHAPTER VI.

THE METAPHYSICS OF THEOLOGY.

THEOLOGY, as a science, is a systematized arrangement of what we can know about God. Natural theology is the science of what we know of him from his works in nature, and Biblical of what is revealed in the Old and New Testaments.

People have ever shrunk from a theology which is exclusively or even mainly metaphysical. Yet first principles have their deep underlying place in systematic divinity as in every deeper science. Unfortunately they are often mixed up with observational principles and practical lessons in a heterogeneous manner. When they are argumentatively employed or appealed to in theological discussion, they should be so distinctly enunciated that all may see what they are, and be in a position to judge of their validity. Metaphysics may help and not hinder theology by bringing out to view the fundamental truths involved in the science.

All the primary principles implied in the common affairs of life may be employed in the exposition of divine truth without being very formally expressed. We may proceed on the allowed existence of bodies, of space and time, of the laws of quality and quantity, and the common logical laws, such as that of contradiction, without formulating them. But there are several metaphysical truths which have a special place in theological discussion, and these should be specially expounded by the metaphysician for the use of the divine.

There is our Personality with our Personal Identity. The conviction attaches itself to us from the beginning and will go on to the end of our being in this world, and, if we have proof of our continued existence, in the world to come. If this does not insure, it makes us look towards, a personal immortality for which we seek proof.

This Personality keeps us from flying up into an airy and unsubstantial pantheism: All is not one, for we know ourselves to be different from God, as he is different from us.

There is Potency with Cause and Effect. We discover traces of this world being an effect as an ordered world made up of many combined materials, a "manufactured" article, as Sir John Herschel expresses it. We see everywhere order in earth and sky, very specially in plants and animals. There is the wondrous adaptation of one thing to another in an arranged system; and the order and adaptation being evidently of things effected, we argue legitimately that there must be a cause of the whole. Theologians do so argue, and metaphysics should justify them in so doing. Thus do we rise to an intelligence above nature: I do not say infinite, but far beyond our comprehension. Here we have one element of the theistic argument.

But there are other effects. There are traces without and within us of a pervading and all-reigning benevolence. This requires us to clothe the intelligence which we have discovered with love.

But we go farther. We have principles within us which constrain us to invest the intelligent and loving One who gave them to us with other perfections. We have personality, and we attribute a like perfection to

him who is caring for us. Higher than all we have a moral nature, approving the good and disapproving the evil, and this must be a garment of his own which God has thrown over us.

This is not all. We are led to ascribe to God an attribute to which we have nothing similar. We have an intuition as to infinity, which constrains us to believe in the reality which it reveals, and the mind is not satisfied till we ascribe it to the one living and true God whom we believe to be great beyond our comprehension, but such that nothing can be added to him or his perfections.

In some of these steps there is an observational element, but it is a powerful evidential one, which makes it possible for the fool to say in his heart that there is no God, and makes him responsible for his unbelief, which he could not be if the whole process were apodictic or demonstrative.

The Jehovah of Scripture comprises in himself — in this respect how superior to the gods of the Gentiles — the high ideas which I have been seeking to unfold in this work. In Biblical Theology they are arranged and applied, and this is done most wisely when only such metaphysical principles are used as are implied in the common affairs of life and in all the sciences.

We see at the close of our investigation that these fundamental truths bear up the other truths which we are required to believe in nature and in religion. We see, too, that our intuitions, like the works of nature, carry us up to God, their author. All the roads lead to the capital. All the streams come to us from the fountain. All the members of the body are moved by the head. If we stop short of this we feel that there is

something wanting, effects without their cause, a road that conducts nowhere, a stream without a fountain, a body without a head. But mounting up thither, all our deeper instincts are satisfied, and we can look thence on our cosmos, and see that it has a stability and a consistency in Him in whom all things consist.

INDEX.

Abelard, 138.
Abstract Notion, 197, 198.
Academics, 81.
Æsthetics, 2.
Agnosticism, 7, 309.
Analytic Judgments, 193–195.
Anselm, 82, 138.
Aristotle, 2, 33, 36, 81, 125, 127, 174, 245, 261, 322.
Attention, 233.
Augustine, 82, 137.
Axioms, 13, 28, 206, 276, 283, 345, 349.

Bacon, 26.
Bain, 122, 189.
Being, 67, 89, 92, 101, 118, 161, 293.
Berkeley, 73, 74, 108, 109, 313.
Brown, P., 328.
Brown, T., 53, 73, 151, 215.
Buddæus, 170.
Buffier, 47, 98, 125.

Calderwood, 139.
Catholicity, 17.
Cheselden Case, 64, 73.
Clark, S., 20, 152, 322.
Coleridge, 285.
Conceive, 278, 282.
Conscience, 217, 222.
Cousin, 54, 290.
Cudworth, 33, 291.

Damascenus, Joannes, 149.
Definitions, Mathematical, 343.
Descartes, 15, 42, 59, 62, 86, 97. (Cogito ergo sum), 106, 111, 125, 153, 174.
Desert, 224.

Eleatics, 80, 111, 118, 244, 293.
English Divines, 40, 138.
Epicureans, 39, 81, 82.
Ethics, 2, 217–243, 352–354.
Extension, 69, 85, 121–123.
Externality, 68.

Faith, 130–180, 268–270.
Fathers of the Church, 327.
Ferrier, 74, 320.
Fichte, 25, 97, 138, 215, 313.
Final Cause, 246, 252.
Forms imposed on Objects, 28.
Franz Case, 64, 127.

Gillespie, 144.

Hamilton, 46, 50, 53, 63, 73, 74, 76, 82, 99, 100, 113, 137, 139, 151, 171, 181, 183, 188, 189, 320, 326.
Hegel, 18, 25, 97, 113, 122.
Heracleitos, 110.
Herbert, 15, 39.
Herschel, 152.
Hobbes, 170.
Howe, 173.
Hume, 59, 89, 102, 173, 289.
Hutcheson, 48.
Huxley, 252.

Idea, 259–262.
Induction, 10, 271, 276.
Innate Ideas, 15.
Instinct, 27, 254.
Intuition, 6, 7, 16, 19, 271–279.

Jacobi, 138.

Kant, 2, 15, 20, 28, 29, 32, 51, 73, 82, 89, 97, 98, 102, 138, 143, 149, 151, 189, 193, 214, 238, 247, 249, 285, 287, 290, 313, 324, 347.
Knowledge, 58, 256, 293.
Knowledge and Faith, 130–140, 181.

Knowledge, Presentative and Representative, 130–140, 256, 265.

Law, 219, 276.
Leibnitz, 18, 46, 87, 102, 152, 174, 195, 246, 321.
Locke, 15, 18, 28, 29, 43, 59, 74, 85, 99, 102, 107, 125, 127, 170, 183, 188, 189, 249, 256–264.
Logic, 2, 350.
Lotze, 56.
Love, 219, 333, 347.
Lucretius, 151.

Mackintosh, 224.
Mansel, 97, 171, 173, 183, 327, 333, 347.
Maxims, 13, 276.
Mental Sciences, 2.
Mill, J. S., 56, 129, 187, 214–216, 225, 226, 328–332, 348.
Miracles, 215, 216.
Morel, 320.
Motive, 237.
Müller, John, 65, 72, 123, 127.

Necessity, 17, 278–284
Nescience, 309, 332.
Newton, 20, 149.
Nihilism, 309.

Obligation, 221–223, 240.

Perception, 12, 18, 75, 79.
Perfect, The, 159–175.
Personality, 90, 97, 356.
Plato, 33, 34, 111, 245, 256.
Power, 93, 102, 128, 129, 205.
Pre-Socratic Schools, 34, 111, 244.
Protagoras, 33.

Qualities of Matter, Primary and Secondary, 78, 80, 85–87.

Realism, 6, 29, 185, 275, 296.
Reason, 28, 285, 291.
Reflex Intuition, 14.
Regulative Principles, 12, 18, 272.
Reid, 48, 76, 85, 98, 213, 285.
Relations, 185, 216.
Responsibility, 237.

Scepticism, 7.
Schelling, 18, 25, 97.
Scottish School, 18, 50, 89, 98.
Self or Spirit, 82–99, 104.
Self-Consciousness, 257.
Self-Evidence, 16.
Sensation, 75, 257.
Sensational School, 59, 82.
Senses, Apparent Deception of, 72–85.
Shaftesbury, 47.
Sin, 227–232, 241.
Smith, Adam, 224.
Socrates, 293.
Sophists, 33.
Spencer, H., 30, 56, 74, 249–255, 334–336.
Spinoza, 25, 106, 111.
Stewart, D., 52, 73, 98, 151, 213, 347, 348.
Stoics, 38, 81, 261.
Synthetic Judgments, 193–195.

Tennyson, 88.
Trendelenburg, 151.
Trinchinetti Case, 64.

Understanding, 285.
Uniformity of Nature, 213–215.
Universals, 200.

Virtue, 219.

Whately, 3.
Whewell, 55, 341, 342.
Wish, 233.
Wolf, 246.
Wordsworth, 159.

THE COMPLETION OF DR. McCOSH'S PSYCHOLOGY.

PSYCHOLOGY.

I. The Cognitive Powers. II. The Motive Powers.

By JAMES McCOSH, D.D., LL.D., Litt. D.

President of Princeton College; Author of "Intuitions of the Mind," "Laws of Discursive Thought," "Emotions," "Philosophic Series," etc.

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"These Motive Powers fall under three heads—the Emotions, the Conscience, the Will.

"It is not to be understood that these are unconnected with each other, or with the cognitive; emotions contain an idea which is cognitive. The Conscience may be regarded as combining characteristics of each of the two grand classes, being cognitive as discerning good and evil, and motive as leading to action; the Will has to use the other powers as going on to action.

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